

# The Australian Apple Review

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# The Australian Apple Review

Vol 3 No 10 November 1986



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# Editorial

A NEW release of software for Apple computers has shown us two things:

- Programmers are no longer constrained by the shackles of older technologies.
- Programs have not yet exploited to the full the capabilities of the computers available to them.

These two statements might seem contradictory but they are, in fact, but two sides of the same coin.

The best demonstrations that we have that programmers have thrown off the shackles of the past come with *Ready Set Go Version 3.0* and the new *ClickArt Draw*.

When desktop publishing programs were originally written for the Macintosh they all tried, as best they could, to imitate the work of a high end, and extremely expensive, typesetting and graphics station. This they did more or less until *Ready Set Go Version 3.0* came along (it should be available from Imagineering by the time you read this).

This program allows a user with a

Macintosh and an Apple LaserWriter to do everything that any typesetting house can do with a high end machine. And having done that it adds more features that no typesetting graphics workstation has ever possessed. For example, it incorporates a spelling checker so that made-up pages can have a final proof check before being printed. Which cuts down on the need for the services of the archaic and expensive readers of the press.

With the new *ClickArt* program we have gone one step further.

This program allows a designer to produce types of artwork which, in truth, it is literally impossible to achieve in any other way, no matter how expensive the equipment. Here, the programmers have said let us go into the wild blue yonder. They have not tried to emulate what has been done before but started to explore the further reaches of the machines.

They have not, as yet, nearly approached those limits. The hardware is

still far more powerful, far more capable, than the software. Evidence of this can be seen by studying the possibilities of PostScript code.

This graphics page description language offers far more features than have ever been offered by any program on the Macintosh. These strengths, these abilities, still need to be exploited.

The same holds true of the Apple II GS. Because of its astounding and outstanding audio and graphics capabilities it is still waiting for the programs that will do it full justice. These programs of the future, these new generation wonders, will not be written by a single programmer alone. Instead, they will be the result of harnessing the talents of a first class graphics artist, a top line audio engineer and a sure-footed programmer. Then, and only then, will we see programs that use the full technical power of the Apple IIGS.

The best, for both the Macintosh and the Apple IIGS is, indeed, yet to come.

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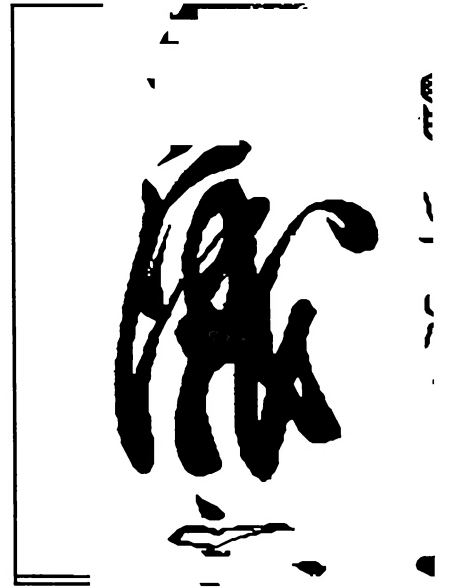
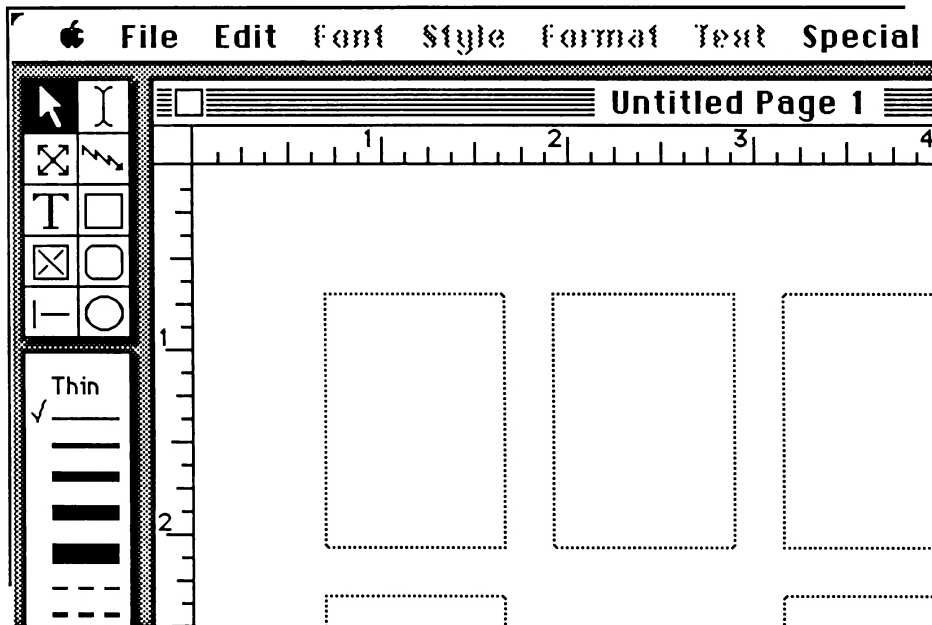
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#### The Australian Apple Review

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# At last, the perfect desktop publishing program

**RSG 3.0 reviewed by Gareth Powell, who is, to say the least, impressed.**

**"READY SET GO Version 3.0 is categorically the best desktop publishing program that is available anywhere in the world for any price on any computer."**

That opening sentence is a fairly dramatic statement that is going to attract unkind words and opprobrium from our competitors and other producers of desktop publishing programs.

Tough.

The truth will save us.

Because *Ready Set Go Version 3.0* is truly that good, that much better than the opposition, that much further ahead of any other desktop publishing program.

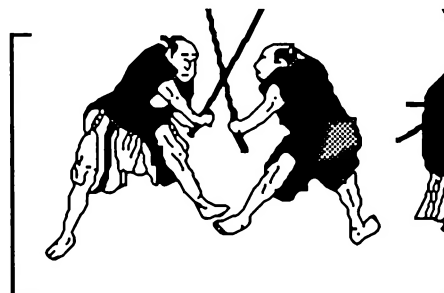
To get these claims into some sort of perspective we first have to look at the

way that desktop publishing programs came to the Macintosh.

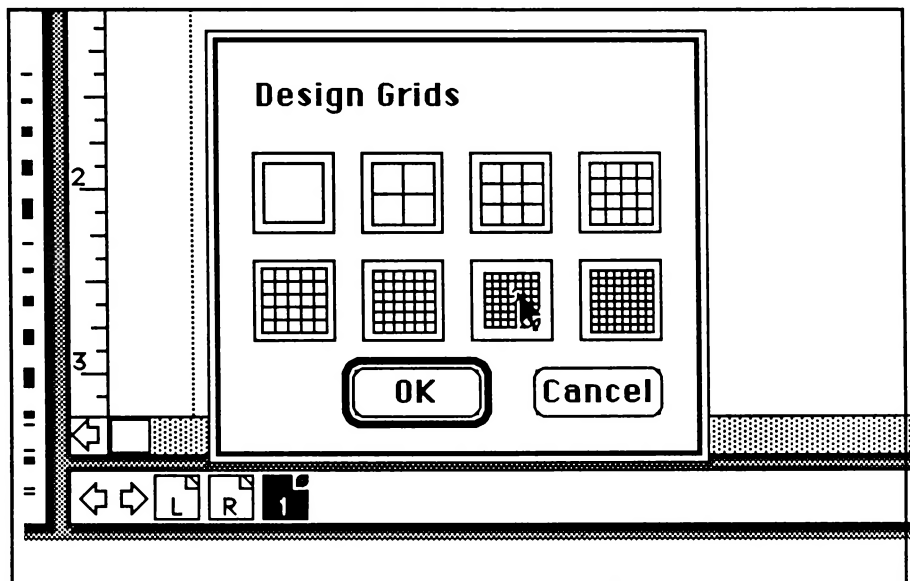
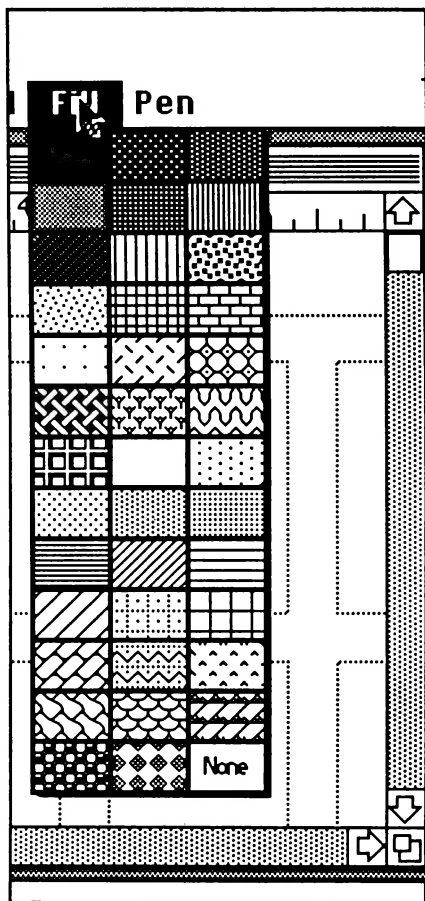
When the LaserWriter and the Macintosh appeared it was obvious that desktop publishing was the way to go. All we needed was the software. The first we saw was the dreadful and quite unusable *MacPublisher I* (since totally redeemed by

*MacPublisher II*, a superb program with much going for it) which we tried to use in Bandar Seri Begawan in Brunei to produce a magazine called *Muhibbah*, a Malay word meaning a warm feeling moving towards friendship.

After we had turned away from *MacPublisher I* in disgust, we discovered *Ready Set Go Version I*. This had several bugs in it, none insuperable, but it seemed to us then, and it seems to us now to be a desktop publishing program that could easily be fitted in to the real world. This was the first desktop publishing program used with the Apple LaserWriter and the Macintosh in the commercial world. We know because we had the first LaserWriter that was ever re-







On the left is shown some of the amazing variety of screens that are available on this program. Above right are the various types of screens that you can choose. They greatly simplify the job of pasting up pages.

cause we had the first LaserWriter that was ever released to the public.

After *Ready Set Go* came *PageMaker* from Aldus which had a curious symbiotic relationship with Apple management. They seemed to totally embrace the *PageMaker* philosophy and reject *Ready Set Go*. In another country a senior Apple executive told us that Apple did not want *Ready Set Go* used in a demonstration of desktop publishing. *PageMaker* was the program that they approved of, which they backed, which they thought best reflected the capabilities of their system.

(What Apple management think now that Aldus have entered into a liaison with MicroSoft and Hewlett Packard to produce a desktop publishing system which will be a true rival to the Macintosh is difficult to imagine. One presumes they are something less than wholly chuffed.)

Shortly afterwards Manhattan, the publishers of *Ready Set Go*, produced version 2.1. This was a considerable improvement on the earlier version with all of the bugs removed and some very worthwhile features added.

There was a fair controversy amongst publishers as to which was the preferable program, *Ready Set Go* or *PageMaker*. Many publishers had never heard of *Ready Set Go* but when it was demonstrated switched over to that program. Others thought it was too formal, too restricted. That it put designers into a straitjacket. It was a lively discussion with strong views held on either side.

What Manhattan have done now is so improve their program that it walks away from everything else on the market.

They have taken all of the desirable features of *PageMaker* and added them to their own program.

They have taken all the basic features of typography and added them to

their program.

They have asked publishers and designers for their wish lists - and then incorporated all of the goodies into the program.

We have been using this program in this office to produce magazines, even though it is only a Beta test version. It appears to be totally bullet proof and bug free. All we had was the program, no documentation, and yet we have not had a moment's problem with it. There are probably several goodies hidden in there which we have not yet discovered but all of the features we have used so far are quite astoundingly good.

## Let us look at them one by one.

### • HYPHENATION.

If you print columns of text so that they are even on both sides instead of ragged they are much easier to read. This is not a question of opinion. There is enough careful research to prove it time and time again.

There is no problem in doing this on a wide measure - say 6 centimetres or more of column width - because the long and the short words even themselves out. Where the problem arises is when you use a narrow measure. Then you may find unsightly gaps because a big word doesn't quite fit.

What is needed is hyphenation.

On previous programs we did this by





changed a sentence in the early part of the copy we had to remove all of the hyphens and then reinstate them

This led to nervous breakdowns.

The new version of *Ready Set Go* does all of this automatically. The result is far more professionally laid out text which is even more readable.

As in *MacPaint* with this new version you can select screens from a wide range that are on offer. Or you can create screens of your own.

## GRIDS

Layout grids appear on your screen which are invisible to the printer but of great help when you are laying out the page. You can choose from one of several sizes.

## PENS, BRUSHES.

Again as on *MacPaint* you can select the size and pattern that is used when drawing lines and strokes.

## DISPLAY SIZE.

Exactly like *PageMaker* you can display the page you are working on either double size, actual size, half size or fitting into the screen so that you can see the whole of the page at once.

## RULERS

You can have rulers showing on the screen, or not, as you wish. These rulers can be in inches, centimetres or picas.

## SPELLING CHECKER

There is a built in spelling checker which means, in theory, you could use this program as a word processor. In fact, we still prepare our copy with *MacWrite* or *The Word* and use the spelling checker to do a last run through at the final stage. Saves a lot of errors and gives us a braces and belt feeling about our copy.

## TOOLBOX.

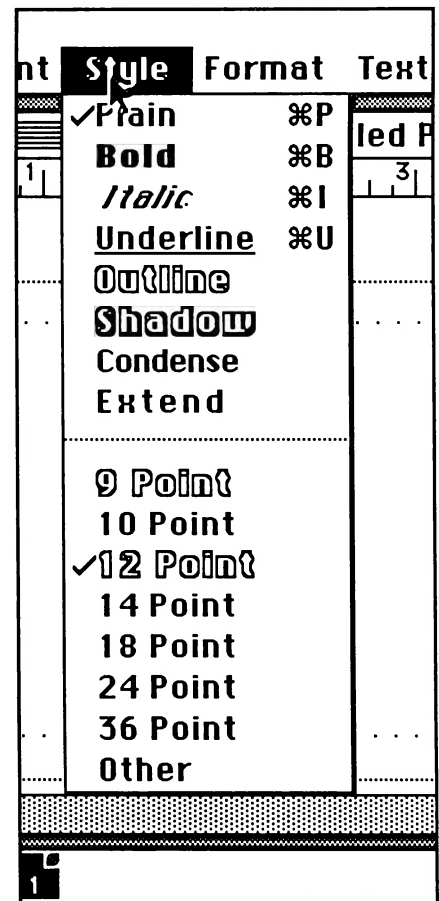
The publishers have taken the toolbox from *PageMaker* and have lifted it, holus bolus, over to *Ready Set Go*, Version 3.0. All they have changed is position, it is on the left side of the screen instead of on the right at the top. This means you are able to manipulate text, crop, place, reposition and resize illustrations and all of those other good things.

## LINES

There is now a wide range of rules available for use in different styles. Those on display rival the number available with *LetraSet*, and that is a very wide range indeed.

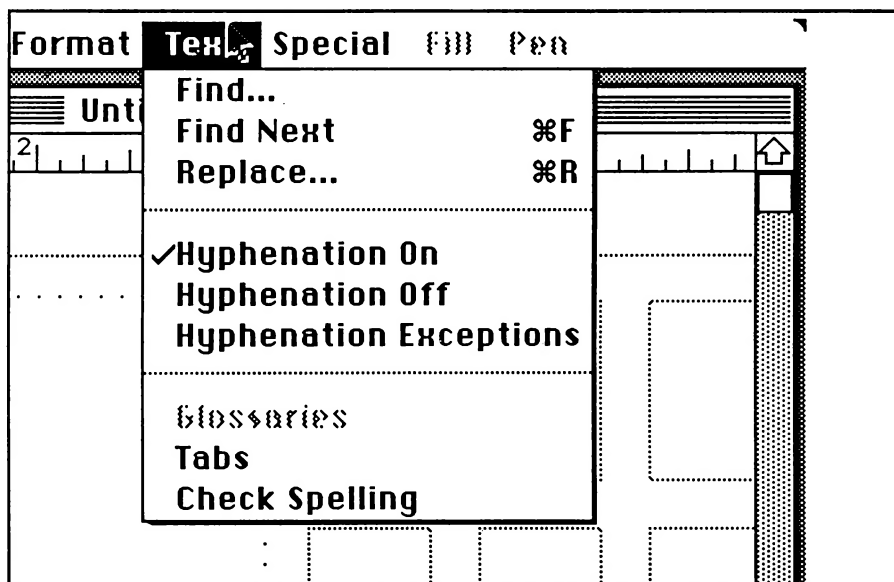
## LEFT AND RIGHT PAGES

The facility exists to set up a right and left master page and load master items into them. This saves an immense amount of messing around and re-entering.

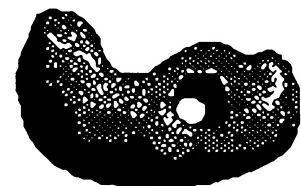


Do we think this is the ultimate desktop publishing program?

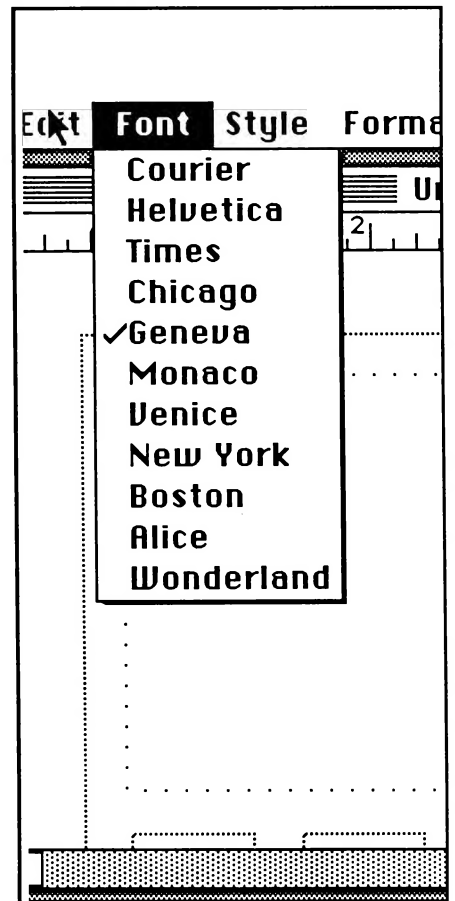
As a matter of fact we think it is not that far away from being just that. It certainly is the best desktop publishing program currently available anywhere in the world on any computer at any price.



On the left the screen shows the hyphenation capability built in. This gives true automatic hyphenations and is worth the price of admission alone. Above are the styles of type which are available. There is almost no limit.







It will be difficult, if not impossible, for anyone to improve on this greatly with the present generation of machines. When we see the new superfast Macintoshes early next year it will be a different story. But for now, Ready Set Go Version 3.0 is the name of the game.

We find it truly amazing that such programming exists at such a high level. It shows that there is effectively no limitation to what can be done with the Macintosh given time and genius.

The fonts that are available depend, of course, on what you load and how much memory you have.

The illustrations throughout this issue come from a Japanese desktop publishing disk.





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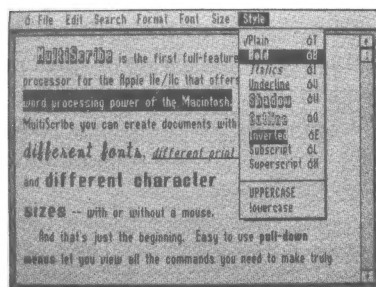
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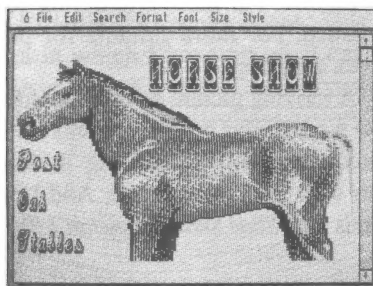
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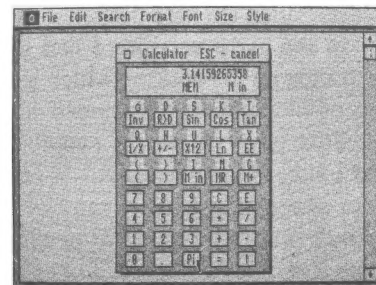
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# The running, moving, jumping, standing still movie - thanks to VideoWorks

Gareth Powell finds that even if you use half the power of this program you can become a poor man's Walt Disney

WHEN I go around the world doing seminars on Desk Top Publishing I maintain the interest of the audience by putting on slide shows (uncharitable souls who suggest that there is no other way I can maintain interest will be ignored.)

These slide shows are created on a Macintosh using *Slide Show Magician 1.3b*. The number 1.3b is very important because I have over a thousand slides built in to the shows and it is only in this latest version that you can access folders within the hard discs.

In the early versions I had to keep each slide on the desktop which led to all sorts of confusion and nastiness.

This program works superbly well and I always have questions at seminars as to where the attendees can buy a copy so that that they, too, can produce the same sort of slide shows.

Successful though it may be *Slide Show Magician* produces a static slide show, an up-dated electronic version of the old church lantern slide show. Even though the slides can be made, in this program, to blend easily one into the

other and to move quickly from one page to the next they are still - in effect and actuality - static.

Far more impressive would be a moving picture. Far more engrossing for the audience. For more suitable for putting across a message.

A moving picture where I could show how a particular program works with the actual operation proceeding in front of their very eyes in real time. And I cannot do this with *Slide Show Magician 1.3b*.

## The OPTIONS Menu

Options		
BurnScene		
Place		%T
Step		%S
Add		%A
BackStep		%D
KillFrame		%F
Blank		%B
Rewind		%R
Switch		%E
InBetween		%G

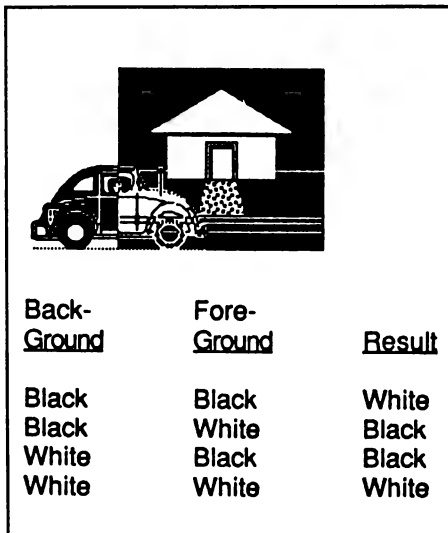
For some time I have been looking around for another program that I could use to get this motion picture effect. Now I have found it. It is *VideoWorks*. In truth, I had used the program a considerable amount a few years ago when I was introduced to it by the Mac crazed William Bullock.

The new version of *VideoWorks* is a quantum leap better than the original version which I explored with young Bullock. This version of *VideoWorks* has enabled me to produce a set of small movies which show desktop publishing in the full glory of moving pictures instead of changing slides, no matter how attractive they might be.

The program *VideoWorks* comes from MacroMind but is published in the United States by the Hayden Software Company. This means that it has a lot of heavy muscle to support, to finance, to implement it.

On *VideoWorks* I can produce quality animation in two modes. One is real time recording and the other is frame by frame.

The program was originally intended



for people who were going to produce cartoons in a high class amateur rendition of the grand and traditional Walt Disney manner.

As an user I am really not into that. Cartoons are not my bag, either making them or watching them. I need them for educational purposes only.

In simple, nay simplistic, terms I use the animation principles of *VideoWorks* to make a Macintosh program appear live on the screen.

How do I do this?

First of all I go through the various desktop publishing programs I want to illustrate, freezing frames. Those that I want to animate I have obtained by running the original program - let's say it is *Ready Set Go* version 3.0 - and then

pressing Shift, Option, 3 to take a snapshot of each frame as it appears on the screen.

This is a very simple process and one that I have used extensively with *Slide Show Magician 1.3B*. All you need to ensure is that there is enough empty space on the disk to save the screens.

What I then do is use *VideoWorks* to take the components of the program and bring them to life.

For example, if at one stage of the program the arrow cursor is zooming across the screen I use *VideoWorks* to animate the arrow and show its trajectory in real live terms. The same with pull down menus. The same with the introduction of blocks, illustrations and texts onto the screens.

I will freely admit that I have not, as yet, achieved the smooth fluency that you would see on a very high priced video program. But I am not that far off.

The results of my efforts are not wholly abysmal.

What I am doing is taking a series of discrete, static images and making them appear to be alive and in motion. That is, in a very real sense, cartoon making.

How is this achieved?

In perhaps the most interesting manual I have ever seen for a computer program *VideoWorks* spells it out. This is an area in which I have no great expertise. Therefore, if I may, I will give you a quick precis of the excellent history of

animation which appears in the manual.

The way in which animation works is through a phenomenon known as persistence of vision.

Toys were made in the 1830's which let you see a number of images being presented to the eye in various ways.

This was done with a machine called the Zoetrope which worked with a series of vertical slits placed at regular intervals around a rotating drum.

Another device called the Phenakistoscope worked on a similar technique but used a rotating disc instead of a drum.

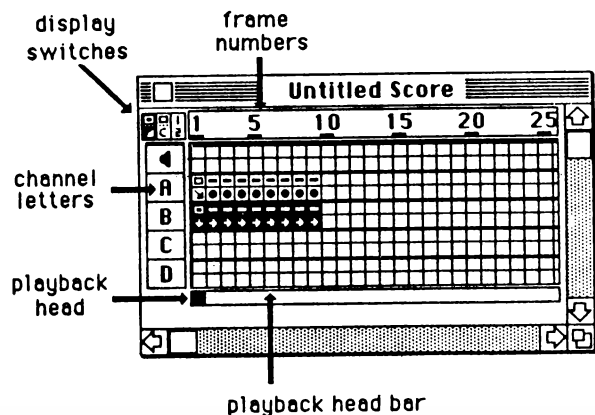
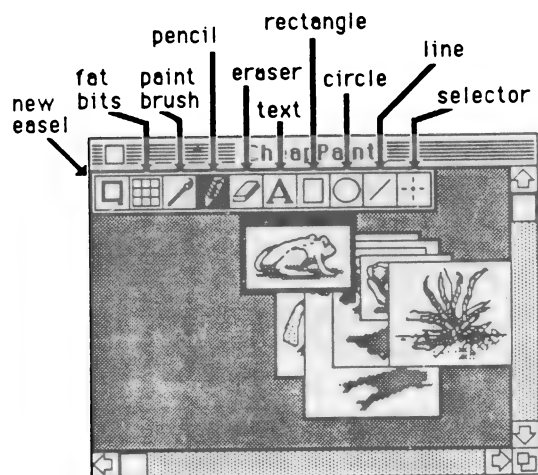
At the end of the last century Edward Muybridge (his first name is spelled in a wide variety of ways in different reference books so I have kept to the simpler version) produced thousands of still photographs showing humans and animals moving. He was producing still photographs from animation.

The way he got into the business is really fascinating.

There had been an argument for some considerable time as to whether a trotting horse ever had all four feet off the ground at the same time.

If you look at early paintings of horses running you will see that it was thought by artists through the centuries that horses trot by having all four legs extended at once.

The Governor of California commissioned Muybridge to photograph his horse, Occident, in motion so that the re-





sults could settle the dispute.

Muybridge took a number of still photographs and showed, once and for all, if horses do take all four feet off the ground when they are trotting. At the time there was no cinematic graphic equipment and Muybridge, in order to set up a complete series of stills, used a bank of still cameras based about 21 inches apart and triggered by trip wires.

Over the next twenty years right into this century he photographed people, birds, dogs, cats and dozens of other animals in motion using the same technique.

To show the photographs he developed a machine called Zoopraxiscope which would project the images onto the wall. In other words he found a way to bring back the motion that he had previously stilled, frozen, into single frame.

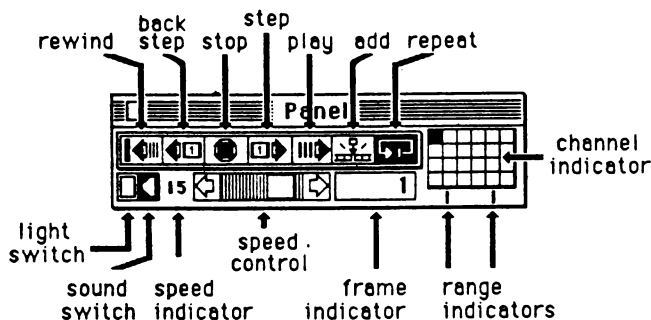
His equipment was large and cumbersome but nevertheless he developed a working method of producing a sort of animation. He was, in a sense, the first animator.

Once movie projectors and flexible film were available all of the components for true film animation were to hand.

In 1913 John Bray and Earl Hurd were the first animators to use celluloid sheets or "cels" as they are called in the trade. These cels could be overlaid in order to produce faster times in producing animation.

Nevertheless cartoons and animation still took an immense amount of time to produce. And they still do to this day.

Motion picture film at the time was being run through at 18 frames per second and therefore a one hour animated cartoon required as many as 64,800 individual frames. Later the projection rating increased to 24 frames per second the number of frames needed for an hours animation was increased to 86,400.



When Walt Disney started making cartoons in the 1920's the basic techniques had already been set.

In 1937 he produced *Snow White and the Seven Dwarfs* and this became a standard for the industry.

Disney introduced many technical refinements and also provided far greater realism of character.

The information that is on a film can be produced in digitized form for a computer. This was discovered in the seventies and some of the movies produced since - such as *Star Wars*, *TRON* and *Star Trek II* - used computer animated sequences to a very major extent.

Until very recently all of this razzmatazz and impressive jollity was the province of people with large amounts of money working in the professional arenas. The advent of the Macintosh has changed all this.

With the Macintosh you too can make extremely professional home cartoons. You too can become a neighbourhood Walt Disney and make a running, jumping, standing still movie.

All of which is of great interest and import to those people who have artistic talents and who have a need to become mini film producers.

In my case this is simply not so.

All I want to do is produce visuals for seminars which will knock the audience's socks off. And stop them going to sleep.

This I can do very easily with *Video Works*.

Basically I take the frames that I have created by dumping the screen and then manipulate them within *VideoWorks*. As a result, sadly, I very rarely use the tools which are readily available at the top of the *VideoWorks* screens.

These tools include fat bits - a means of getting into the basic pixels which are the molecular structure of a computer screen - a paint brush, a pencil, an eraser, a means of inserting text a means of making rectangles, circles, lines and so on.

This top tool bar comes from a program called *Cheap Paint* which is included as part of the program and is available in the pull down menu.

Nor do I use many of the major facilities which include the ability to introduce characters, manipulate them across the screen, give them seeming animation and integrate them with the background. Plainly mine is a very simplistic use of a very powerful program. But for me it works and it works very well.

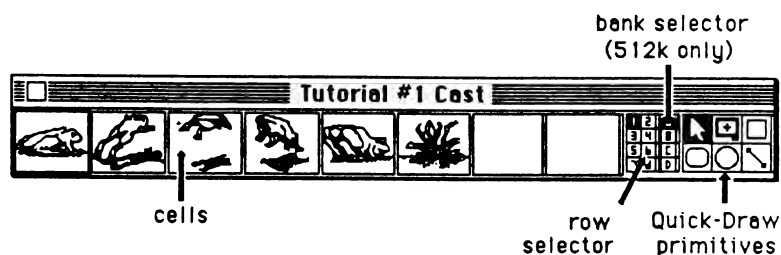
It is not idleness that stops me from using all of the powerful features that are available. It is simply that I do not need them for my specific use.

For example, this program is capable of animating 24 objects on the screen at the same time so that they can move behind and in front of each other. This is a system known in computer graphics as Sprites.

I have, indeed, used this aspect of the program.

But only when going through the very comprehensive tuition program which is included with *VideoWorks*. Since then I have hardly needed to touch it because my needs are so simple, so straightforward.

Nevertheless even I, artistic klutz that



## SOFTWARE

I am, can see how it would be tremendously useful if you were making a real cartoon.

The greatest virtue of *VideoWorks* is that it operates interactively. That is you can make a change on the screen and see the result immediately.

In a sense, I am the wrong person to review this version of *VideoWorks* in that my use of it is very tight and limited.

In another sense I am the ideal person. Because I feel that Hayden Software and the distributors have missed out on a major potential market which is represented by the way I use the program.

They are so carried away by way the razzle dazzle that is available on this immensely powerful and complex program they do not perhaps realize that it is almost ideally suited to produce the best video teaching aids that have ever been seen.

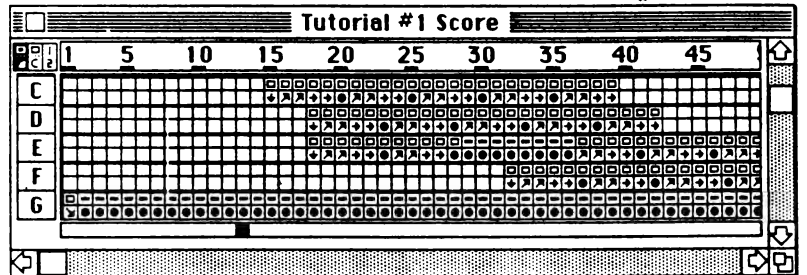
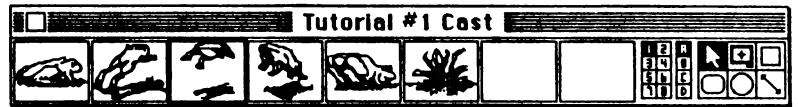
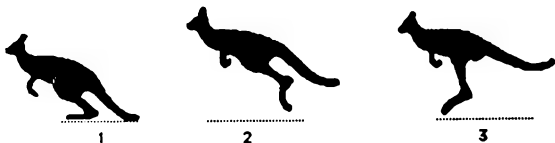
In the seminars that I have been conducting around the world the audiences have literally been stunned by what I have been able to achieve with *Slide Show Magician 1.3B*.

Now that I have moved over to *VideoWorks* the results are of an order of magnitude better.

The only way in which I could have produced such a program by any other means would have involved a very expensive high end graphics work station - costing me about quarter of a million dollars plus an immense amount of work by professional animators to try and follow what I have vaguely in my mind.

As it is I can do it very simply on my Macintosh and I can produce a twenty minute informative video film in less than a day's work. This is a most amazing breakthrough.

PS. For those who are interested in the way that *Video Works* operates purely for the sake of making cartoons I have found that Carl Braga is heavily into this program and is, indeed, even as we speak trying to make the great Australian cartoon. Next month we will try to have an article by him explaining how he uses *VideoWorks* as a cartoonist. For me, as a presenter of seminars, it already works magnificently. It will be interesting to see whether Carl feels the same way about it as a cartoon maker.



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The



# THE FICHSOFT TRUTH

December 1986

## THE SOFTWARE SEALED SECTION

### Apple Software

Even Adam would be

tempted by these APPLES.

Relief at last, Australian Apple users now have a Software supply company that cares. Tracksoft have hundreds of Apple Programs and Peripherals to put the shine back in your Apple.

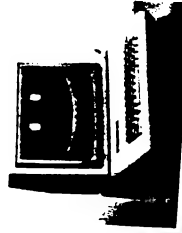
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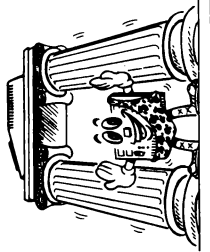
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# Disks can be better, smaller, cheaper, with greater capacity

## What more do you want?

by Duncan McCann

WHEN Apple released their new 3.5 inch disk drive for the Macintosh and then for the II series hardly anyone argued that this was indeed a good thing.

The new disks were far better protected from damage than the old. They were sturdier, they were easier to store and they held a lot more information.

How much information?

With the new standard 800 kilobyte disk you could, if you were writing a novel, store all of the text on to one disk. (If you want to be fussy about this, work on the basis that there are six bytes to the average word in the English language and that the 800 K disk can therefore store about 130,000 odd words, about the length of a medium novel.)

This ability to hold large amounts of data - for word processing, databases, spreadsheets - has ensured that the 3.5 inch disc has become the de facto standard for the whole industry (not just Apple) and is slowly squeezing the 5.25 inch disk into inevitable extinction in, say, ten years from now.

The only problem with the new disk drives has been their price. They were and

are pretty damned expensive.

Now galloping to the rescue like one of the good guys with a white hat on a white horse comes Applix, with a new 3.5 inch disk drive for the Apple IIe which is about half the price of Apple's.

Is it as good as the Apple drive?

Probably a lot better. For a start, Applix say that it is 50 per cent faster in saving than an Unidisk and 25 per cent faster in loading. Which is a very substantial difference because the Unidisk is no slouch when it comes to speed. Most importantly, this new disk drive cuts the price of 3.5 inch data storage almost by half.

Applix have called this new accessory OverDrive which seems appropriate and apposite. Complete with a controller board - which can control two drives - it is retailing at \$495. The controller board can have a clock installed for an extra \$69.95 which will save you the cost of another board and give you an extra slot. The clock facility allows you to time and date stamp files you are creating.

The controller board works in any slot except Slot 0. Applix recommend

you use Slot 7 because this will give you an automatic boot if a disk is already loaded into the drive.

This drive works out of the box with ProDos and Apple Pascal 1-3, but for an extra \$39.95 the CP/M fanatics can have their favourite system and, for the same price, devotees of Dos 3.3 can soon do the same. As the drive was designed and a lot of it built in Australia, for once the full twelve month's warranty means something. If it doesn't work they fix it or replace it.

The drive mechanism is a standard 3.5 inch, 80 track, double sided Chinon model and the controller chip is a Western Digital WD1772. The real time clock chip, an optional extra, is a Motorola MC146818.

**• Note most carefully that although you can, of course, transfer data from a 3.5 inch disk created on Applix to a disk created on Unidisk the two are not compatible and a disk created on one will NOT run on the other.**

**But you can copy both ways, and you can copy at block level so you can copy a whole disk from one onto the other.**

OK. If you have a 5.25 inch drive system is it worthwhile changing over to the newish 3.5 inch discs. In a sense the answer will be dictated by your budget. If you are as strapped for cash as most of us you are going to struggle along with a 5.25 inch disk drive and smile.

But if you are a fairly serious user of the Apple, especially for business, then make up your mind that sooner or later you will be getting one of these drives.

The new high capacity disk drives - can you afford not to have one?

For us the Apple II is a machine we use for inputting text.

At the speed at which we write, 3,000 to 6,000 words a day not being uncommon with the occasional frenetic burst through the 10,000 word barrier, 3.5 inch disks with their extra capacity and their speed of access is the only way to go. On one disk we can hold the whole of at least two week's work, sometimes that of a whole month. Because the disks are easy to store and are fast in use we keep proper backups. These backups can be done quickly and painlessly. Which is the way it should be.

If you are using an Apple II for serious work then you will need one of these drives sooner or later.

Applix, with their intelligent pricing policies, have brought them within your reach.



# BACK<sup>4</sup>UP

## ESSENTIAL DATA DUPLICATOR

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addition to backing up disks, **EDD 4 PLUS** includes several useful utilities such as examining disk drives, certifying disks, displaying drive speed rpm's, plus more!

■ **EDD 4 PLUS** runs on Apple II, II Plus (including most compatibles), and IIe, and is priced at \$190.00 (duodisk/ unidisk 5.25 owners must add \$32.00 for a special cable adapter). ■ A standard

**EDD 4** version which doesn't include any hardware is available, and can be used on Apple IIc and III (using emulations mode) and is priced at \$125.00.

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WARNING: EDD is sold for making archival copies only



# Have a Nice modem

*by Gareth Powell*

IN HONG Kong companies call themselves by strange names simply because the Chinese owners have been slightly misled in the meaning of the English words they are using. Thus we have the Bacon Rubber Company, the Leakee Boot and Shoe Company, the Most Glorious Restaurant and so on. All this came rushing back to mind when I was given for review the Nice modem which comes from the Nice Computer Company in Western Australia. In fact, it is not an inappropriate name for the modem, and probably appropriate for the company. The management has a relaxed way of trading and writing manuals which I, for one, find very endearing.

For example, in the front of the manual for this modem they say they test every modem before shipping and then add, "but we are not Gods". If the modem fails or ceases to work within twelve months of normal use they repair or replace it free of charge.

The Nice Modem 2 - the model I tested - is an intelligent modem working at either 300 bits of information per second - about as fast as you can read - or at the Viatel speed of 1,200/75 bits per second or at 1,200 bits of information per second in both directions which, I believe, is going to be the standard here in Australia in the next few years. This modem operates with the standards laid down by the CCITT, the international committee on telegraphy as used here in Australia, as well as the Bell standards so beloved of the United States.

The modem interconnects through an RS 232 outlet so before you use it on your Apple II, no matter which vintage, you need a card with an RS 232 socket

which will fit into a vacant slot. I used an Apple Super Serial card of uncertain age and had few problems in the set up. (Note the IIc and the Macintosh already have such sockets available, albeit of different shapes and sizes).

The modem itself works from a 12 volt direct current power supply - transformer supplied - and connects into the telephone system using an American plug type adapter. You can then plug your telephone into the back of the telephone.

When you set up your Nice 2 modem you find on the front panel a series of Led (light emitting diodes) lights which blink on and off in different colours to let you know what your modem is doing.

From the left they are as follows:

- **MR - Modem Ready.** This green Led lights up to let you know that you have switched the modem's on/off switch to the on position, and your modem is powered up and ready to go.
- **RD - Receiving Data.** This red Led comes flashing on when your terminal, your computer, is receiving information or the response signals are being sent to your computer by the modem. It flashes depending on the type of information that is coming down the wire.
- **CD - Carrier Detect.** This orange Led comes on when a genuine carrier signal is coming down the wire from the computer that you want to talk to. A carrier signal is transmitted when there is no data, no information being sent, being transmitted, just to reassure the modem that a connection still exists, that more information is going to be sent or received and that it is not to panic if nothing happens just for the moment.

This orange light shows that a soothing tone from the other end is keeping the modem happy and receptive.

If the carrier tone is of a poor quality - because of a double dreadful telephone connection, a sickly telephone exchange or whatever, the orange light will not come on even though a carrier tone of sorts can be heard. It may be good enough for you to hear it but it is not good enough for the modem to work with it.

Note, however that this is a greyish area and the CD light can be switched on even when the carrier signal is on the iffy side and you are getting garbled messages.

The definite information given by this light is that when it is not on transmission is not happening. It being on does not automatically prove the opposite of that.

• **TD - Transmitted Data.** This red Led flashes when information, data, is being sent, transmitted, from your terminal, your computer. (I realise the way I am writing this makes a mockery of the language of Milton and Shakespeare but I want to be quite certain no one gets confused with the technical terms. Communications is a minefield of technical terms and they can put the Absolute Beginner off for ever).

This light helps you see that your modem is correctly connected and that data, information, is being transmitted, sent, down the wires. Like the RD light - its functional twin - it flashes when things are happening in a sort of reassuring way.

This is no absolute guarantee that everything is working. On the other hand, if you get not a glimmer of light from the red Transmitted Data Led when you are supposed to be transmitting information you know that something is amiss and the system is not working properly.

• **HS - High Speed.** A red Led that comes on when you are working at 1,200 bits of information a second. Bit of a nonsense this as 1,200 bits of information is an average speed. I consider high speed is when you go

## HARDWARE

zooming over 10,000 bits of information a second or even more.

• **TR - Terminal Ready.** A steady red Led that shows you whether the terminal ready line on the RS 232 connector is operating or not.

This information is not going to carry the amateur much further. Unless you know about break-out boxes and the arcane intricacies of the RS 232 standards (which are frequently no standards at all) I suggest you ignore it. As it happens the modem can be programmed to ignore it for you.

• **AA - Auto answer.** A red Led which lights up to show you if your modem is in the auto answer mode. That is, it is ready to accept messages into your computer - which must be switched on - while you are away. This Auto Answer Led should be read in connection with the next one, the OH.

• **OH - Off Hook.** A green Led which lights up to show you that the modem is connected to the phone line and that transmission is in progress one way or the other. If this light is on and the AA light is on do not try to dial out on the telephone using the handset until the OH light switches off. If you do, you will interrupt transmission and lose information going one way or the other.

That is the front of the modem which, when it is working, looks like a Christmas tree in a feeding frenzy. I strongly approve of all these lights. If you regard them logically as a diagnostics tool they can help you check as to whether your modem/computer/telephone line/software is all working as it should.

At the back of the Nice 2 modem there are two Bell telephone sockets which take the connection to your wall socket and allow you to plug a telephone in. If you prefer, you can buy a double adapter for your wall socket and plug both your telephone and your modem in that way.

Next to that is a female RS 232 socket which connects you to the socket on the Macintosh or the Apple IIc or to a socket extended from a suitable board on the Apple II+ or IIe.

Next to that is a small reset button which you use when you want to get back to the factory preset default settings or if you want to go back to the currently saved settings. In the manual it says, "This switch should not be used if you do not know what you are doing." Fair enough. In future I shall ignore it entirely.

Then comes the power socket where

the lead from the transformer fits.

Finally, there is the on/off switch. The system that should be followed for plugging in is first transformer into a 240 volt outlet. Then transformer plugged into modem. Then turn on the mains power. Then turn on the modem switch.

I unpacked the modem, fitted the plugs together and had it switched on in a couple of minutes. It is truly as easy as pie.

I was using for a terminal program *TerminApple* by the redoubtable Paul Zabrs, simply because it is the best, most powerful communication program available for the Apple. Once I had booted and tested the system it all worked without a hitch.

This is an intelligent intelligent modem and it can be programmed - if you know what you are doing - to handle almost all communication chores almost totally automatically. Perfect for a turnkey system. Because of this built-in intelligence it is also amazingly user friendly and perfect for the Absolute Beginner in communications.

Having now tested the modem I will eventually have to return it to the Nice Computer Co.

I am in no hurry to do so.



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AVAILABLE FROM YOUR APPLE COMPUTER DEALER

by Todd Reybroek

Ever watch old war movies with a Vet? Your living room becomes a foxhole and the enemy is anyone who moves in from the kitchen. He'll shout the battle calls, curse the director, and tell you how it really went down in World War II.

And it doesn't help if you're a free-living surfer either. You tell him that if the big guys in Canberra or whoever they're taking orders from, ever call the land of Oz to arms you're not giving up the king tides for nobody, then the patriotic son of a gun is going to want your hide for a seat cushion. Because that's the way it is. They're proud of what they did and they think it's right. But how 'bout you?

"Well, sir, just as long as they don't cut in on me on my wave they can come and share the beach with me any day. I don't think they're fighting us sir, I think they're just looking for a better wave themselves. And there's enough to go around."

Nice philosophy, if it could be that way. Well, how about taking another look at how it was.

Yes, another war movie, another vet and his computer, another hostile video game. This one's called *The Dam Busters*. And this one's a little out of the ordinary. So if you're into that kind of stuff, then I'll take a look for you now, and see if it's worth the load.

The setting is an early spring evening in 1943, and the mission - a mission to fly in at 60 feet and bomb three dams that provide most of the water for the chief concentration of German trek. It's deep inside the enemy's border and you'll be flying a modified Lancaster bomber and have to navigate without error, repel enemy fighters and barrage balloons, and then drop a massive underwater bomb under the most exacting conditions.

No margin for error.

There are three levels of play.

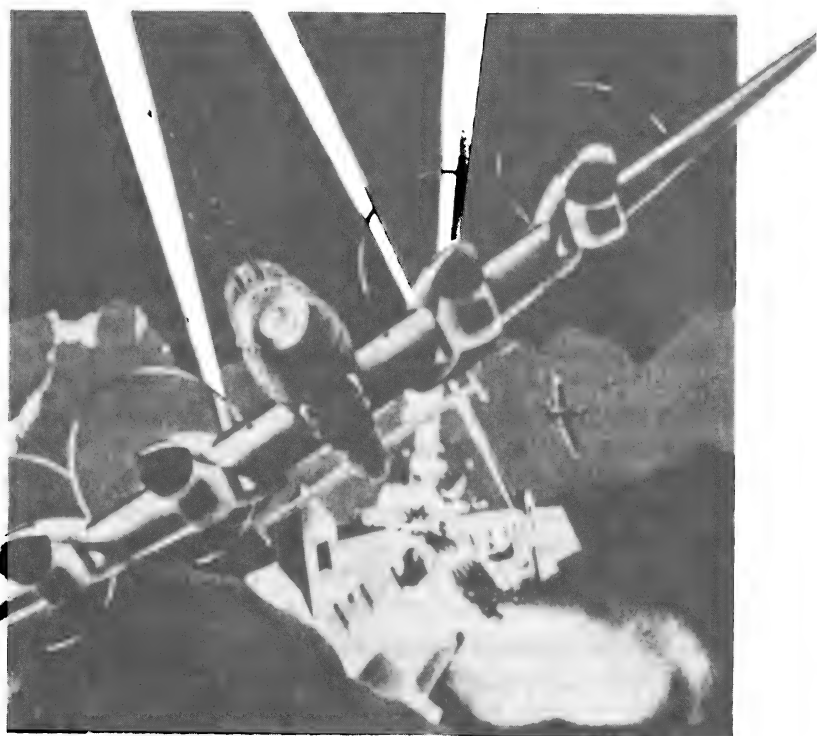
1. Practice dam approach (no enemy action).
2. Start over the English Channel.
3. Take off from Scampton field.

And I advise that you work your way up through the levels, because it's a pretty tough assignment, any trip you decide to take.

First, you should practice the bombing run itself (level one). There are a number of steps to be done quickly, but enough practice will make this virtually automatic.

In the next level of difficulty you begin over the English Channel. You will man numerous positions in which you navigate, so you must know each of the necessary tasks so well that they can be performed almost instantly. You must also develop a pattern, as real pilots

# THE DAM BUSTERS



do, for monitoring different operations.

Your flight in Germany will be fast and furious. You'll need to know which things have to be handled immediately, such as barrage balloons and fire in the engines. You will probably spend a good deal of time in the front gunner position. When the pace is too hectic, hit the space bar. This freezes the action and gives you a moment to think until you press the space bar again to continue play.

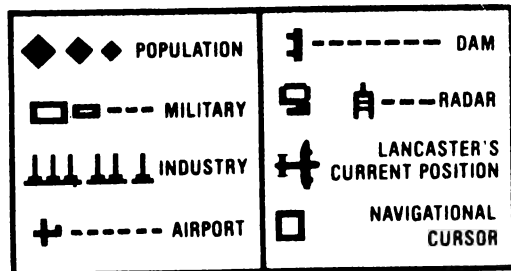
It will take considerable effort to perfect individual tasks, such as shooting a fighter that is bobbing and weaving while firing at you.

The highest level of difficulty is the Squadron Leader level. In the taking off from Scampton Field you must set your flaps and engines correctly, then adjust engines and retract flaps and landing gear once in the air. You will fly south from England and you're ready for the rest of the mission - across the English Channel and European continent to the target.

In *The Dam Busters* the Lancaster Bomber has eight positions:



## GAME REVIEW



pilot, front gunner, tail gunner, bomb specialist, navigator, first and second engineer.

You use the joystick to bank, climb or dive. The lights on the horizon, and the horizon gauge, let you know the orientation of the plane. From the pilot's position you can see the approaching barrage balloons, fighters and search lights.

The display screens on the program are pretty basic. Any elaborate detail is not there. The instrumentation is fuzzy, and on screen the dials and gauges are not listed. If you're a fighter vet from the war and you can remember the particular instruments, you're fine, but by the time you keep flicking back to your manual to find out what you're reading you could have an enemy fighter in your face delivering unhealthy

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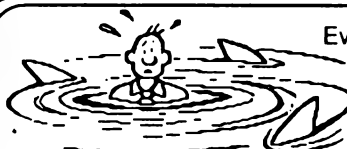
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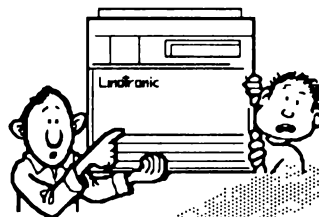
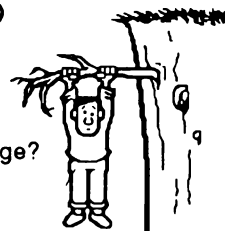
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## GAME REVIEW

portions of metal slugs. The horizon lines from the cockpit window are just rows of dots, and no ground or surface features are shown.

As you bank around to the left or right, or even all the way back, you see nothing on your screen but extended rows of dots which are supposed to be horizon lights. Sure, you're flying at night, but at only 60 feet up there has to be something else in sight other than illuminated dots. (Like 61 foot trees shooting up out of the ground!) The designers could have added a little more artwork to the program.

The Lancaster bomber is heavily laden and sluggish in response to climbing and descending in altitude. Because of this inertia, there will be a delay in attempting to pull out of a dive, even though the nose of the aircraft is pulled up above the horizon.

What is very interesting on the game, however is the map settings and cursor movements involved with getting your craft on course.

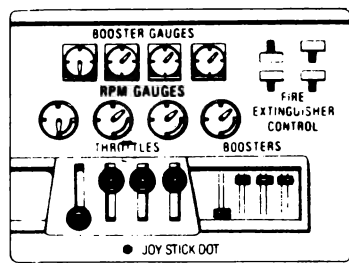


Figure 7 BOOSTER GAUGES



Figure 8

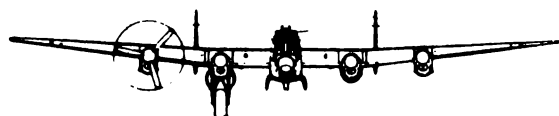
The beginning player should set his course at the very start of play. The navigator has two different map views. The first shows your current position, with a plane moving across the map. Push the fire button to switch to the second view, which displays the navigator's cursor on the map. Move the cursor to the edge of a screen to go to the next map.

Switch to this position at the very start of play, and your cursor will be on a map of England. Go south one screen and east two screens to reach the area of Germany with the three dams and their corresponding lakes. Position the cursor on a dam. As you move the navigator's cursor, the compass heading at the top of the screen will change and so will the green marker on your pilot's compass. This shows you the heading to take when you return to the pilot's position.

The six maps of Northern Europe contain coloured symbols that stand for major landmarks: green crosses - military installations, black aircraft - military airport, blue circles - city, purple smoke stack - industrial center.

There are many positions of play to learn on *The Dam Busters*. Front and Tail Gunners get pretty busy when the defence fronts move in. You learn the dogfighting skills, fly in fast and low to knock out searchlights and perfect the strategy of shooting accurately from a distance.

The first engineer controls the engines and propellers. The screen at the engineer's department is a lot better than the view from the cockpit window. The first engineer has four throttles, four boosters and corresponding gauges to worry about, in addition to a fire extinguisher and close monitoring of just



where the fires break out when hit.

The Bomb Specialist is to set the preliminary switches such as the bomb rotator and spotlights for the bombing run. The spotlights shine down on the water, and when their reflections are just touching each other the plane is at the right altitude. As Bomb Specialist timing is crucial. Flicking your screen to set the necessary rotator changes means that the front gunner function is abandoned so that you will not be up front to man the machine gun against attack. On the other hand, if you take too long getting away from the front guns to activate the rotator changes you may set the switches too late and miss the targets altogether. Little things like that make the game that much more interesting and keep you on your toes.

In the actual bombing, position is everything. At the very beginning of the bombing run you must turn the plane so you can get lined up with the dam wall while still over land, then fly straight over the lake to the target.

Engineering is important, checking that speed and altitude is correct and that you keep checking these to ensure that you have not wavered off course. Continuously you'll be flicking back and forth from pilot to engineer to finally the bomber's mode.

With success, the bomb skips over the water above the torpedo nets and hits the crest of the dam, sinking along its face to 300 feet below the surface, which fires the depth-sensitive hydrostatic pistols and set off the blast. If you miss, try it again because the Lancaster carries several bombs.

Yes, a sophisticated amount of technics and travel, keeping you hopping.

Though the graphics are inferior to some, the style and designs behind the action are better than most. It's an absorbing game, deserving higher intellect than others and a desire to increase in skills of accuracy and discernment.

Music is plain, never really there, though the sound effects are good.

What rates a mention is the excellent documentation. The manual contains very good diagrams on the various frames presented within the program, but as well, there are the portfolios on the research gathered for the basis of the game.

There is a report on the formation and training of the 617 squadron with notes on the low-level performance of the modified Lancaster bomber by Guy Gibson, a Wing Commander from the Royal Air Force. Additionally, an intelligence and tactical review is provided by J.A. Franklyn-Smith, a Squadron Leader within the intelligence branch of the RAF, specializes on reports of German defence, etc.

Okay. The old WWII vet versus the 1980's surfer. The one who likes the war will like the game.

The one who likes the surf will be itching for "GAME OVER" to splash in his face.

Distributed by: OziSoft Price: \$49.95

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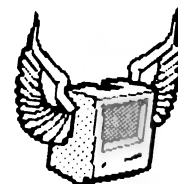
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# The Great International Paper Airplane Construction Kit

by Gene Stephan

By : Neosoft

Requirements : Mac (128K),  
MacPaint, ImageWriter printer  
(or similar), no paperclips.

Distributed by: OziSoft

Price: \$59.95

Rarely does a book/software package come along which fits into the definition of sheer genius. *The Great International Paper Airplane Construction Kit* just happens to be one of these rarities.

Admittedly, not everyone will find this their cup-of-tea. However, those who spent countless hours at the backs of lecture theatres or class rooms and have sought to plant a skillfully designed and cryptically identifiable piece of paper into the back of an unsuspecting lecturer or teacher, will buy one of these without thinking twice.

*The Great International Paper Airplane Construction Kit* is computerised playfulness. Within the pages of the book are over a dozen designs which can best be explained by the first paragraph of Chapter Four - The Planes.

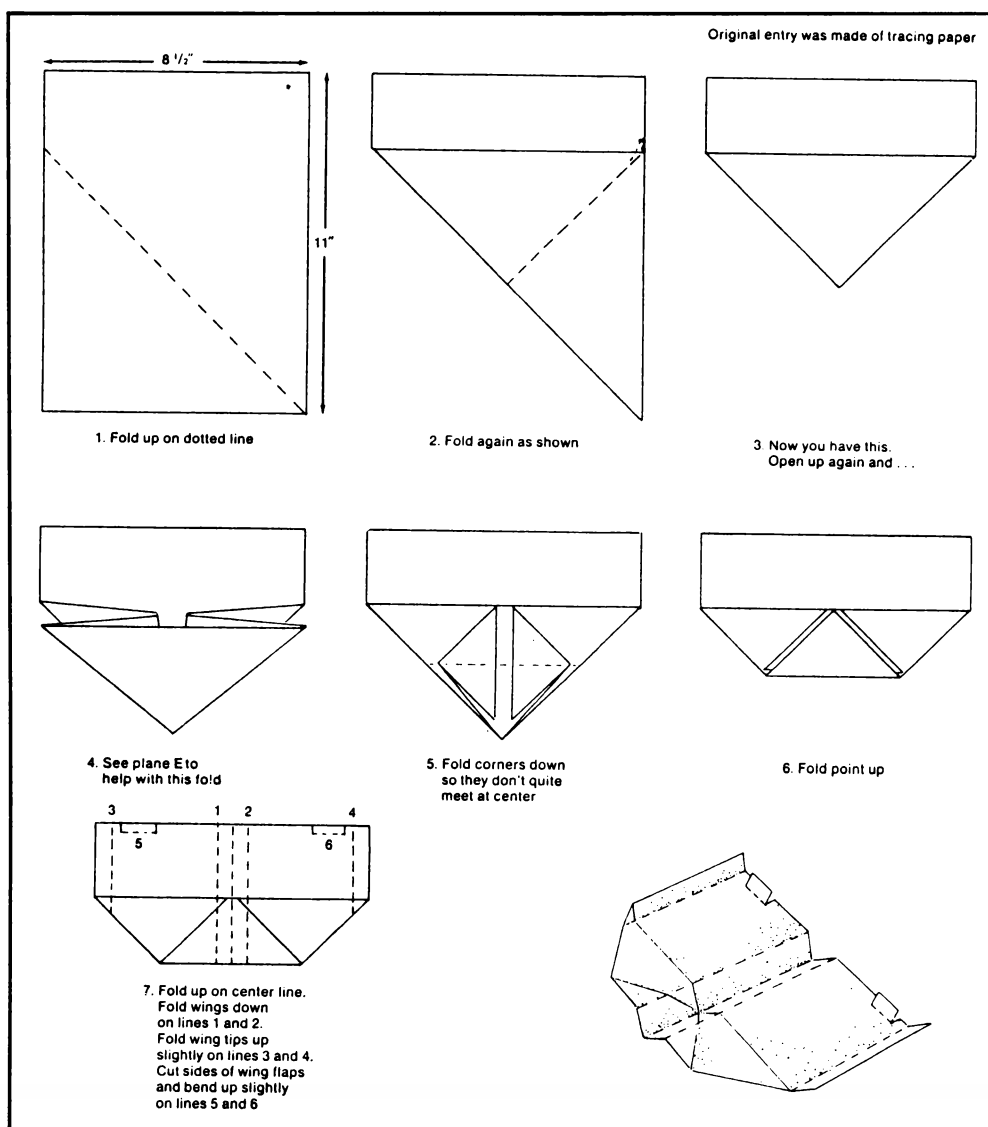
"All the basic designs for these planes are based on those contained in the *Great International Paper Airplane Book*, which tells the story of the First International Paper Airplane Competition, sponsored by *Scientific American* in 1966/7."

"The book includes the designs of the winners and of other noteworthy entries. The final Fly-Off contained separate competitions for a number of different categories : Aerobatics, Duration Aloft, Origami, and Distance Flown. Each of these had Professional and Nonprofessional

awards. It's interesting to note that the planes themselves were devoid of any ornamentation. A few were even done on company stationery, with design notes scribbled all over the wings and tails. With this kit you'll be able to recreate these winning planes and make them look like winners too."

The book allows you to do more than just follow what has already flown. The software is a simple foray into Computer Aided Design (CAD) and allows the construction of your own models.

The disk also contains a library of insignias and markings, decorations, camouflage, pilots with silk scarves and other hardware required such as missiles, wheels etc. If you are creative then the sky is the limit as designs and pilots can be developed with *MacPaint* and used on your own planes or on those on disk. As a sample of what's in store, I have



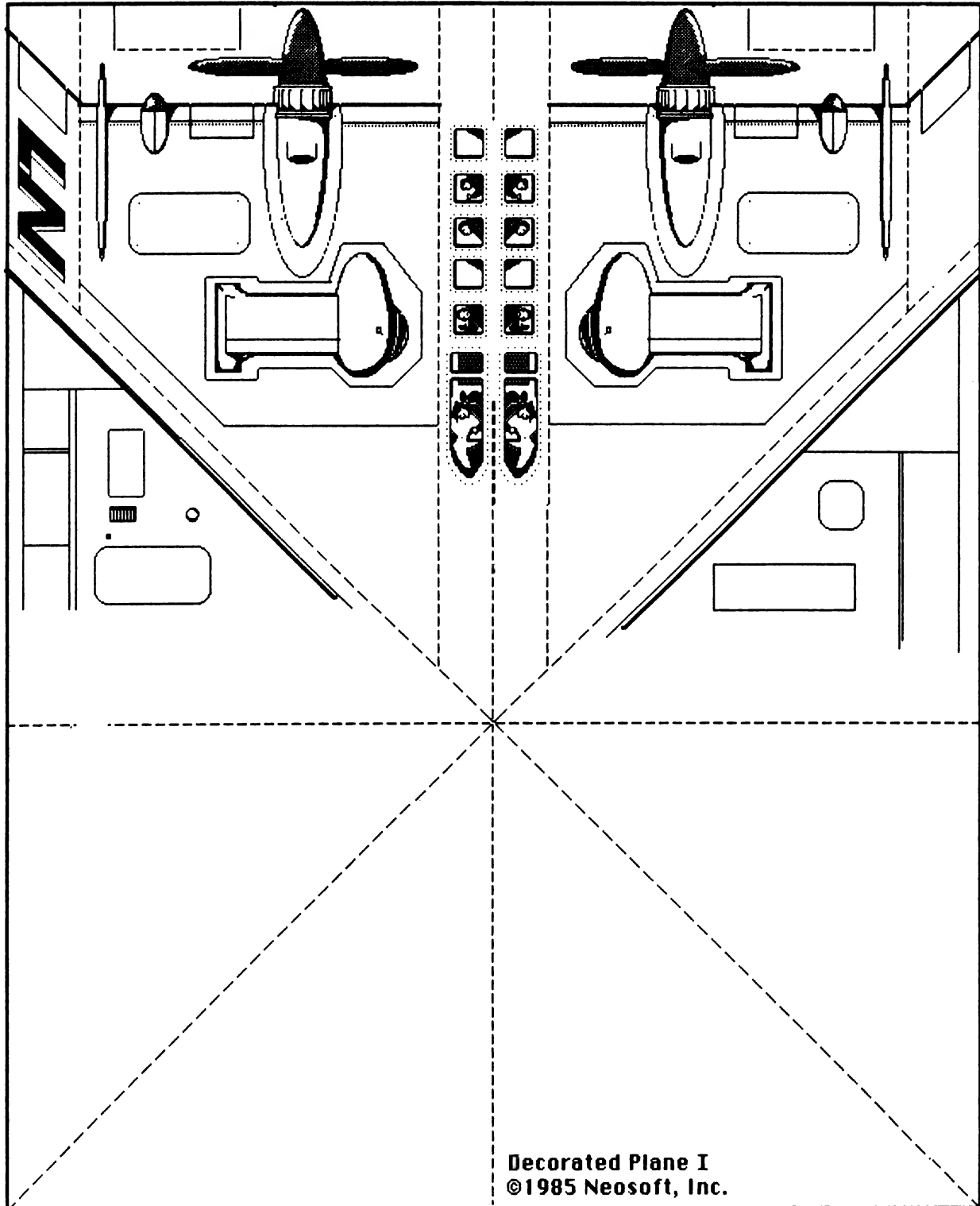
## BOOK/SOFTWARE PACKAGE

included one of the pages from the book. It is reproduced in full so spare a thought for whoever wrote on the other side of the page of the *Australian Apple Review* and get a taste for yourselves. This plane incidentally can be flown upside down too and can achieve some amazing feats.

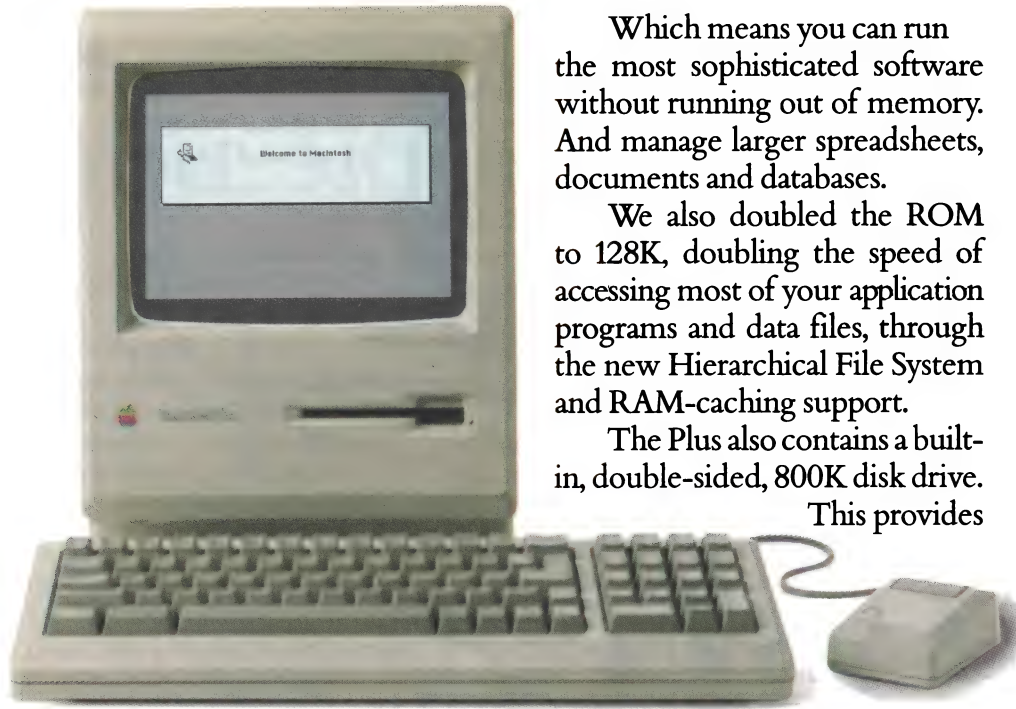
Included in the instructions, for novices only, are sizes of paper for optimum results, how to throw, ideas for modification

and even how to fold.

All in all this is a fantastic book. It would make a magnificent Christmas present. As all the basic designs are included it is even worth buying this book if you are into paper planes but don't have a Mac - as the book says on the back cover "throw this software right out the window". Well, those without Macs can do it literally. 🍏



# New Macintosh Plus. We've added



This year Apple introduces a new Macintosh.

Macintosh Plus.

As the name suggests, it's evolutionary, rather than revolutionary

(It's not our policy to bring out totally new computers for the sake of it. Instead we strive to perfect existing ones.)

Macintosh Plus is as simple to learn and use as before.

But there are some big differences, encouraged, we don't mind admitting, by current Macintosh owners.

Some of you asked for more power, others speed. Some needed greater storage capacity, others expandability.

Some heavy number-crunchers wanted a numeric key pad and conventional cursor keys built into the keyboard rather than remote.

Done. Done. And done.

The pluses of this new Macintosh include a full megabyte of RAM (expandable to four megabytes).

Which means you can run the most sophisticated software without running out of memory. And manage larger spreadsheets, documents and databases.

We also doubled the ROM to 128K, doubling the speed of accessing most of your application programs and data files, through the new Hierarchical File System and RAM-caching support.

The Plus also contains a built-in, double-sided, 800K disk drive.

This provides

twice the capacity of the previous Macintosh and the equivalent of 400 typed pages, or a bulging file drawer.



If that's still not enough, you can always plug in another 800K external drive.



Or you can really go all out and add our new Hard Disk 20. (Its 20 megabytes are about 10,000 pages worth.)

Just plug in a Macintosh Hard Disk 20 and you can keep all your software, files, worksheets and

documents within a moment's notice of your screen.

Add the Apple program Switcher, and you can actually work with several applications at once, moving information from one into another with the greatest of ease.

So you can transfer notes from an outline to a report – or numbers from a data file to a spreadsheet – as fast as you can click your mouse.

## **AppleCare.**

*All Apple products come with an automatic 3-month warranty covering all parts and labour.*

*But this year, Apple introduced a sort of "Warranty Plus" through the AppleCare service programme.*

*If you fill out and mail to us the registration form enclosed with your equipment, you will receive nine extra months' cover on top of the normal three.*

Macintosh Plus also features a new SCSI connection port (dubbed "Scuzzy" in typical fashion by the development team).

SCSI stands for Small Computer Systems Interface and it's an industry standard.

We've virtually opened up the architecture. But what we've really done, of course, is open up a whole new world of possibilities.

The Scuzzy port let's you daisy-chain up to seven high-performance (and often low-priced) peripherals like hard disks, file servers and tape backups from all sorts of third parties.

Given all this power, it made sense to team it with equally impressive printers.

The new LaserWriter Plus is just such, producing documents with text and graphics of publishing quality.



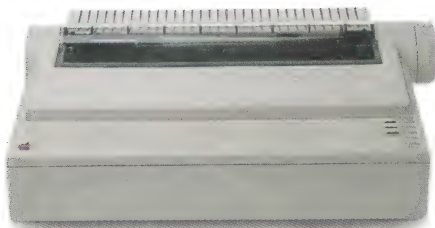
# everything except complications.

And it maintains this fidelity on copy paper, letterhead, labels, envelopes or overhead transparencies.



LaserWriter Plus has 35 different typefaces built in, a choice that would embarrass your local printer (and his invoices).

But if you don't need publication-quality printing, you can have near letter-quality by teaming up your Macintosh with the ImageWriter II.



It prints in three different modes: high-quality, standard and draft. And churns it out at speeds of up to 2½ pages per minute.

You can feed in single sheets automatically with the optional SheetFeeder.

And print up to seven colours using appropriate software.

ImageWriter II can also be shared with other Macintosh users via AppleTalk.

But this Macintosh isn't called Plus for nothing. You can just add and add.

Items like an AppleTalk Personal Network.

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# BOULDER DASH

by J Mark Hunter

Ripened coal. Think about it.

You get those black hunks out of the ground, apply the pressure, and we're talking sparkling diamond current accounts.

And the rich are dreaming. The rich are South African Caucasians slipping into slumber with the sound of the giant machinery noisily keeping busy down below, biting farther and farther into the earth, searching, scanning the walls, tasting the soil for the magic within.

When they get it, it's after a long, long tough time, and for the owners the success is sweet.

Pretty soon, there's going to be a computer game on just about anything. We're quickly getting there. Today we've got one based on the above, but from a different perspective, for different reasons.

Let's go with them, find out what happens down there.

And it begins with the wonderful world of animation. The computer bringing to life the colour, the sparkle, the vibrant riches of the characters behind the screen.

Peter Liepa has truly done a magnificent job on his creation of *Boulder Dash*. Not since *Dragon's Lair* have the cartoon characters of a game been so pleasing, so enjoyable to view in play.

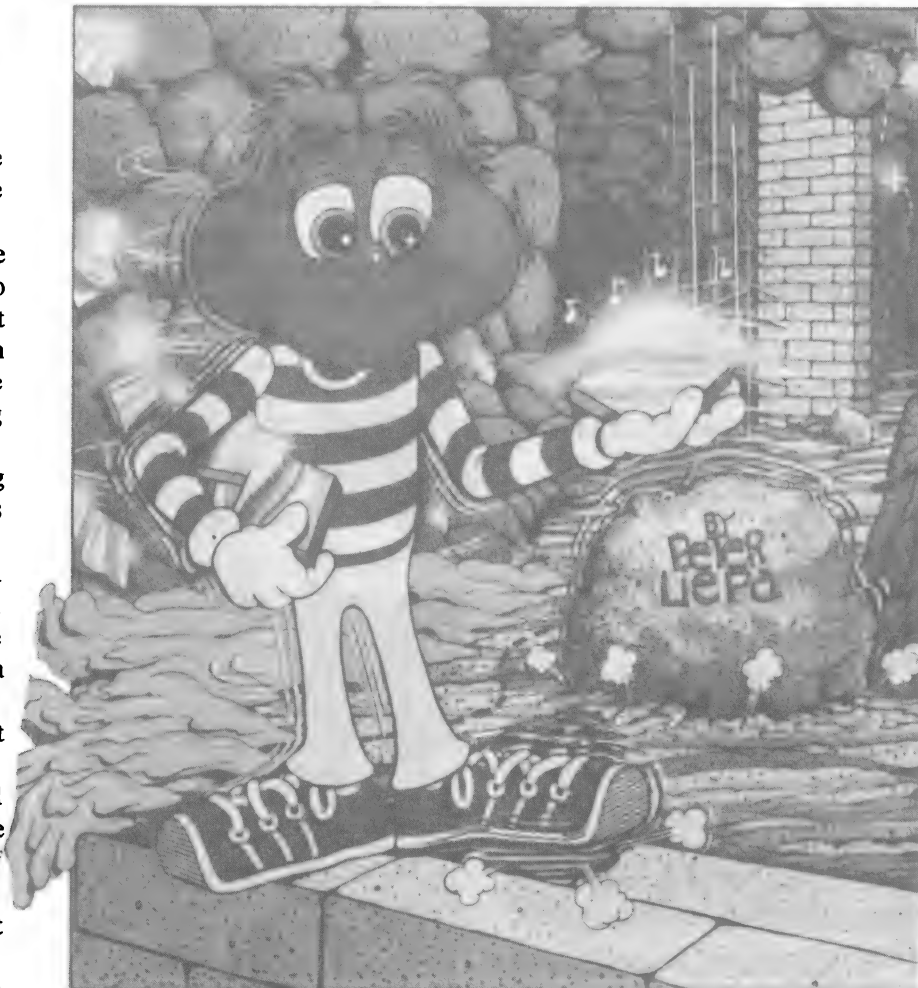
Let's dash inside and take a look.

Let's stay inside, because you'll have too much fun to want to leave.

We've got a friend here, called Rockford. He's the star of the game, and we'll be with him for the duration of the program.

Rockford is out in search of jewels and he's frequenting the caves and hollowed caverns of the earth to find them.

The objective of *Boulder Dash* is to search throughout each cave and collect as many Jewels in as short a time as possible. Once the indicated amount of jewels are collected, the door to the mysterious escape tunnel is revealed to you and you go onto the next level.



What actually gets you to that objective, though? Well, Rockford starts off at the beginning of his journey in the first cave of the program. There are 16 caves in the game comprised of several scrolling screens. He must search the caves by the various methods presented to find the jewel of the cave before the timer on the particular cave runs out. Though there are many things to hinder your progress in the making.

I have not as yet figured out exactly what Rockford's race is, but it's not human. He's sort of a Cabbage Patch Scarecrow, a cross between Freddo the Frog and John Howard. He wears sneakers, white sailor pants, and a red and white striped T-shirt. His face is orange.

He's a friendly guy, but though he has no enemies through personal affront, there are nasty entities within the cave walls that don't like him there messing with the soil and the baubles cloaked inside.

You start with three chances at success per game. Bonus tries are awarded every 500 points, and as Rockford tunnels his way to the different caves these will shimmer and again, bonuses are presented.

The current point value is shown on the top left of the play screen, to the right of the picture of the jewel. The number of points per jewel change as they

## GAME REVIEW

are determined by the type of cave, difficulty level and bonus status. The bonus value occurs after the required number of jewels have been collected. Every 500 points, the tunnels sparkle for a moment and you get another Rockford. You also score one bonus point for each second of time remaining when you exit a cave.

The game is totally controlled by joystick and trigger button, or a keyboard can be used separately.

With the joystick you direct Rockford on his eager mole through the ground. He has the power to move massive boulders that get in his way and stand underneath such without being crushed.

The boulders are the main hazard of the play, as they stand between Rockford and the entrances to the caves, block tunnels, and hide the location of the jewels inside the caves.

As for the jewels themselves, you must collect the required number of gleaming diamonds in order to exit one cave and advance to the next. In addition to collecting jewels you can create them. For example, by transforming the underground butterflies, suffocating amoebas, or dropping boulders through an enchanted wall. When the proper number of jewels have been collected a flash will let you know that the escape door is revealed and open.

What exactly are these strange insect formations competing for screen attention?

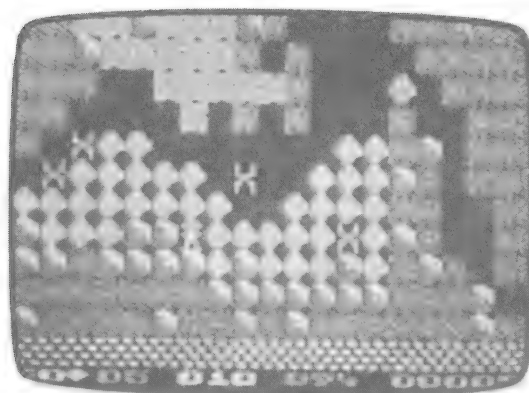
Some of them are fireflies. They glide about the tunnel Rockford is using for freeway travel. Their behaviour is predictable, moving along the edges of all the exposed areas and exploding on contact with Rockford. And that's a big bye-bye to everyone involved. So the way to beat them is by dropping boulders on them so they blow up, and if you want to harness the energy from the force of the blast, make sure that when you go for the drop it's near a wall that you want to demolish in order to get another jewel.

Butterflies are pretty much as volatile. They fly in the opposite direction to fireflies and turn into jewels when they explode.

The Amoeba is a green blob that bubbles and grows through earth and air. Rockford can touch it without harm, whereas the aforementioned bugs will eat dynamite and die on contact. When Rockford surrounds the amoeba with boulders it runs out of growing space, suffocates, and turns into jewels. If only you could do that with dust.

However, if the amoeba grows too large it will die and turn into boulders. And that was not too enjoyable, I found, when after a hard hour or so digging through that stuff I found the ossified sludge parking at the entrance of a cave and shutting up all my burrows. It's disheartening, but you're having too much fun to quit, so roll up the sleeves again and start digging all over.

Then, there was mention of an enchanted wall. Looks like every other wall in the game, but when hit by a falling boulder it begins to vibrate for a limited time, and during this



period any boulders that drop through it are magically turned into jewels. Once the enchanted phase is complete it cannot be reactivated in the same round. Let's not get greedy, we've all got to work for a living.

Another thing to remember in the game is that Rockford can affect an object that is next to him without moving into it. You keep the joystick button depressed and move the joystick in the direction of the object you wish to affect. Rockford won't move, but the object will react.

And when it comes to boulders you will often find yourself digging or moving downwards only to find that a boulder has been toppled by your movement and is about to land on you. The only way to avoid losing your man is to move quickly to the right or left out of the boulder's way, pure instinct of course, but part of the programmable strategy. Rockford runs as fast as the boulder falls, so it will never catch up to you unless you hesitate or stop.

At the summit, when you've got your booty and are preparing for the next flight out of there, you must decide whether to go for jewels of a higher value or exit through the revealed door for bonus points. Personally I liked "a day in the city is worth two in the bush" routine and decided to get out while I still could, taking door number 3 and splitting the show with the cars instead of going for the extra cash. Get that later when you really know the stakes and got the underground territory mapped into your brain.

It's a fun bit of strenuous activity. The graphics are superb. The program is based on diamonds and such and that kind of glitter is hand in hand with the frames and design.

The action is electric, and the difficulty rugged. Don't let the "Freddo the Frog" rundown fool you here, because the guy is one tough toad and the situation not exactly gets you kicking back on a lily pad.

It's been an arcade classic for a while, and now the PC market is raring to go with the home front.

I recommend it, as it promises enjoyable hours whenever available and because the real stuff is a lot harder to come by, and you don't have to get dirty in South Africa to experience the fun.

Distributed by: OziSoft Price: \$49.95



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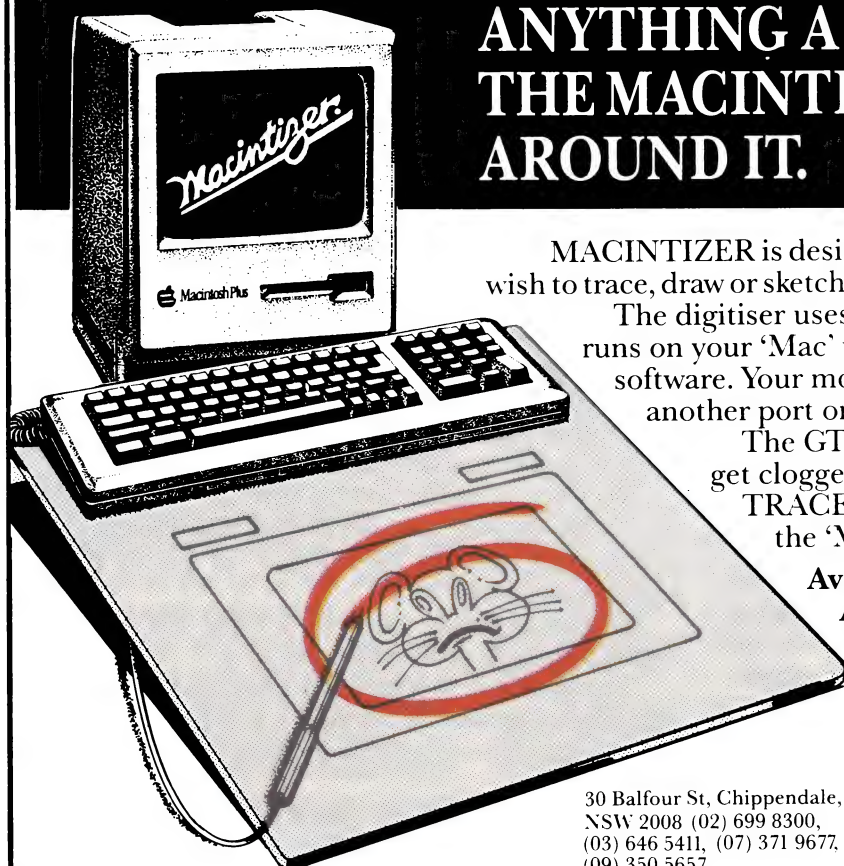
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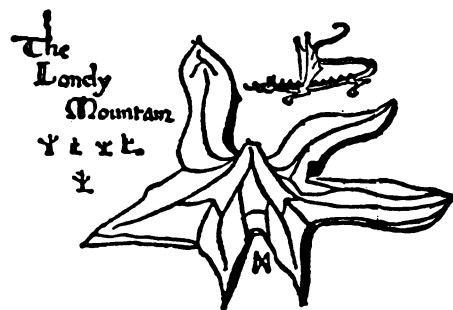
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**TCG** The ImageMakers



# THE HOBBIT

by Gene  
Stephan



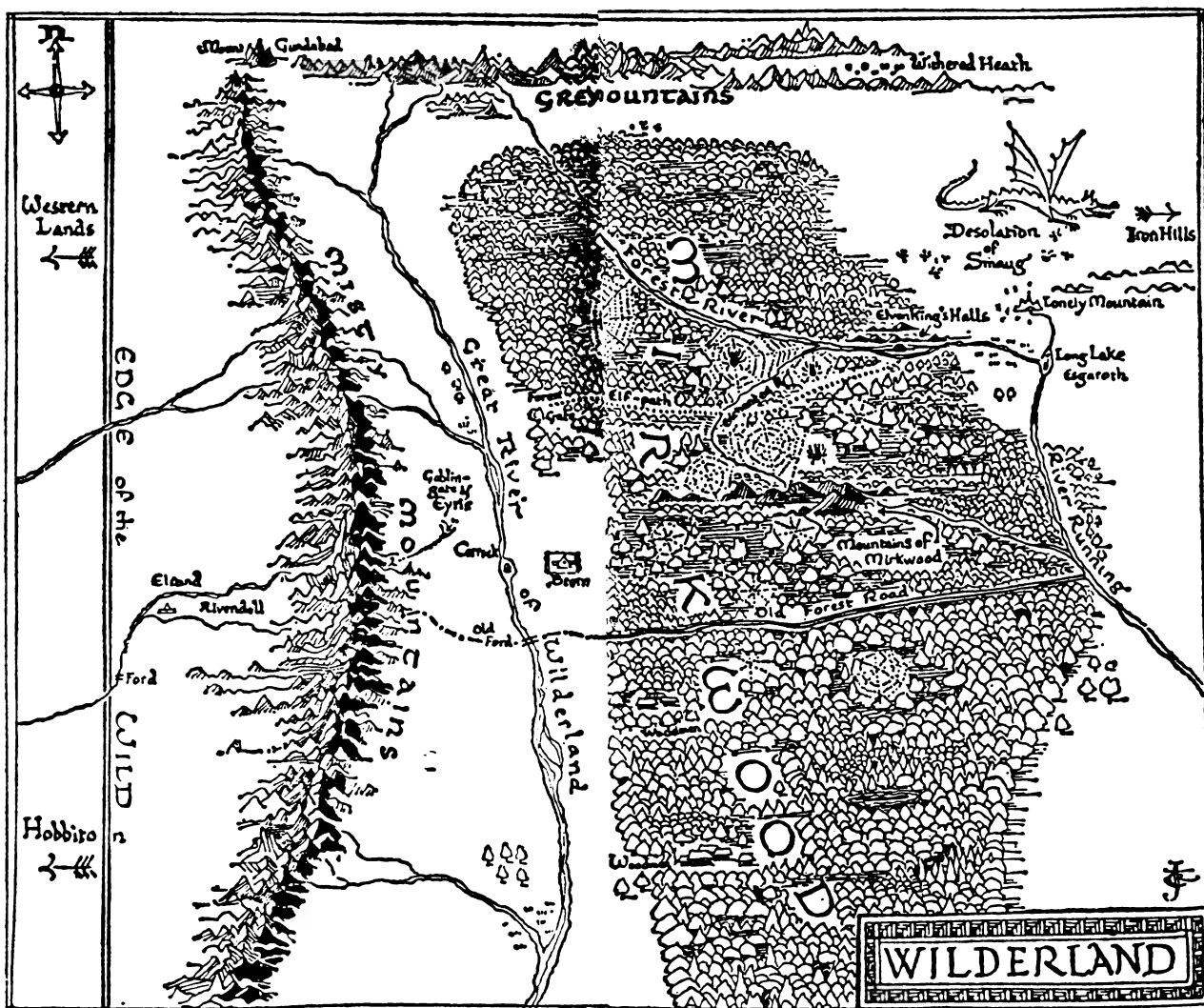
Ordinarily I am not a lover of adventure games. The problem with them is that you are expected to think like the programmer who wrote them, or someone like Lord British, who expounds in magnitudes which require more time and dexterity than this poor soul can muster or devote.

*The Hobbit* from Melbourne House is different. It does have some 'new' twists to the method in which the player can interact with the computer, plus for those who enjoyed in the book *The Hobbit* in their minds, it gives them an opportunity to live it out in real life - on the screen.

The program closely follows the book *The Hobbit* by J.R.R. Tolkien (author of *The Lord of the Rings*) in its

characters, its plot and its locations. In fact you will identify over fifty of the places described in the book as you wander with Gandalf through Middle Earth. Yes, the book is a good background to this game - it will even double as a hint book in some circumstances, and will prepare the adventurer for some of the perils which await. However, some things have definitely been changed, as for example, riddles.

For those who haven't read the book the plot is simple. It is a fantasy adventure about a comfort-loving, unambitious hobbit by the name of Bilbo Baggins. (Hobbits are a little people, about half our height, and smaller than the bearded dwarves. Hobbits have no beards. They are inclined to be fat,



## GAME REVIEW

they dress in bright colours, and wear no shoes.)

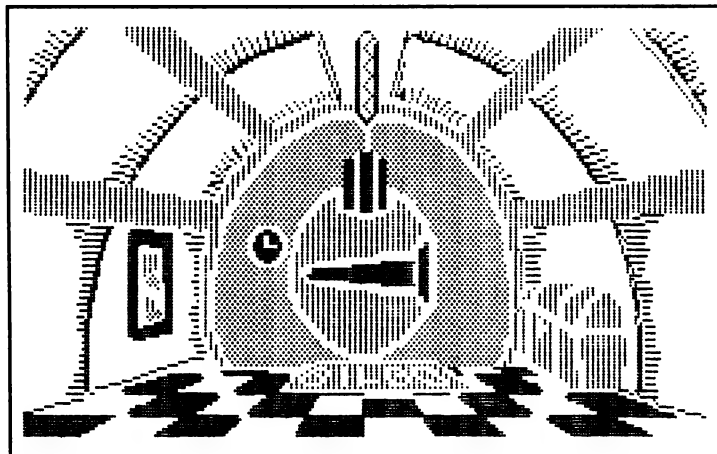
Bilbo is enticed by a wizard and some dwarfs to accompany them into a mountain to reclaim the dwarfs' treasure from a dragon. Along the way, Bilbo finds he has to use all his guile and cunning not only to survive, but also to free the dwarves from dangerous situations and ultimately lead them to the dragon's destruction and a happy ending.

While the program does not follow the story in totality, playing the game after having read the book I found quite enjoyable as it does relieve some of the tension I find with adventure games when one has exhausted one's ideas on methods of some crazy task such as cracking an egg to open a secret passage. Here one deals with the familiar, though the danger still lurks and SAVES are important for sanity.

It is also one of the simplest games to play in terms of flexibility of vocabulary. The program allows some adjectives and adverbs plus "and". While I found myself gritting the teeth reading the manual (terrible is being kind) about "amazing English" and "amazing Animation" and amazing everything else, it is simpler to use than the *Zorks*. Sentences such as "TAKE SWORD AND GO EAST CAREFULLY" are understood in all senses. So are "QUICKLY", "SOFTLY" and "VICIOUSLY" for those who like some blood in their adventure.

Another thing which is handled very well by the program is interacting with the other characters. SAY TO ORC "HELLO" is a valid command and may elicit a response depending upon how the orc feels. It also introduces another level of interaction - you don't just tell the computer which way to go, you can communicate with the characters on the way.

The program is always active and things happen amongst the other characters even as you think or go to the fridge for sustenance, unless the command PAUSE is issued. Although I



*Bilbo Baggins' hole*

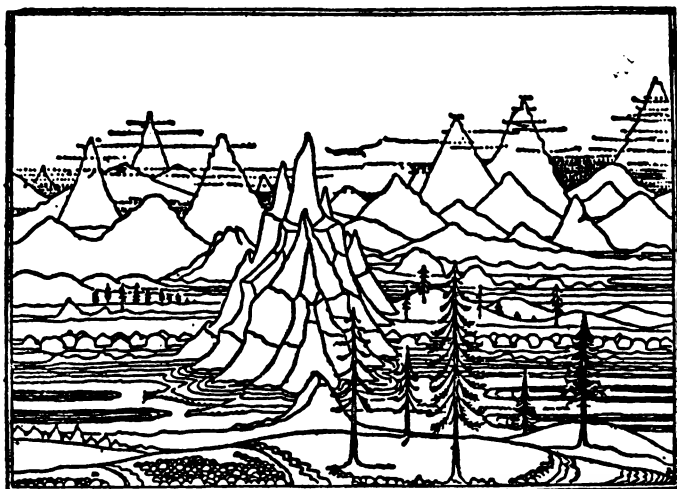
did not test this part of the claim made in the manual, "you will find each time you play *The Hobbit*, things will proceed in a slightly different way, and the further you get into the Adventure, the more different it may be. While this means that there is no unique solution to solving the problems in *The Hobbit*, it also means that you will face slightly different problems each time you play ...", I have no reason to doubt it. Certainly a good deal of effort appears to have gone into the playability of this software.

There are two other commands which are worth mention, especially for those who have spent a good deal of time in Infocom adventures. The '@' causes a repeat of the last command - great to ask the same question a few times, and HELP will produce a cryptic comment on a good number of occasions (though I found this also depended upon how long you were in the one place).

To sum up, the game is one which would appeal to younger players because of the simplicity of play. It will also appeal to those a bit older who have read the book and don't want to spend excessive amounts of time in front of the Apple trying to work out what the \$#@%& program is looking for. Certainly overall, manual excluded, I found it to be very good and worth the investment even though it is copy protected, and no means of acquiring a back-up are given.

Distributed by : Melbourne House  
Requires : 64K, drive, printer optional

*The Misty Mountains looking west towards Goblin Gate*



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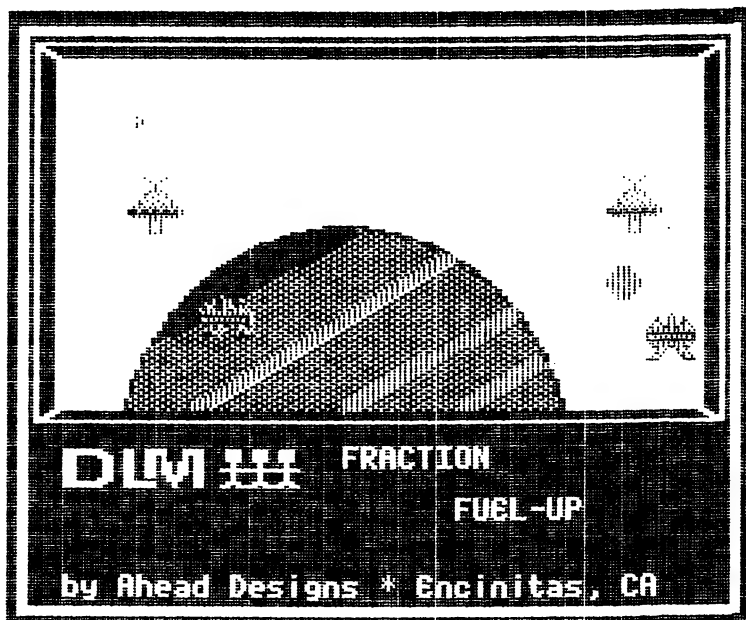
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# Educating the Apple

by Lynne  
Ryder



## Fraction Fuel-Up

By : DLM  
Requires : Apple II+, IIe, IIC  
48K memory, one drive.  
Printer, if available.

First of all I would like to thank DataFlow, the local distributor of this, and other educational software often mentioned in this column, for the providing me with *Fraction Fuel-Up* so promptly after my last review. It appears there was a mix-up in packaging, but as an excellent reflection on the company, this was very quickly picked up and rectified. So, on to the review which never was - last issue at least.

*Fraction Fuel-Up* is a deceptive program. On face value it appears slow, almost laborious to the point where it could be viewed of little value when weighing up effort against result. The teacher will certainly need to spend some time in just familiarizing the children with the different aspects involved before even getting near to the point of practice.

However, after looking deeper into the program, I feel it is time well spent.

The program can not really be called a game in the sense of arcade type reward or a necessity for manual dexterity. It needs time and thought to play but does present the learning material in a game-like manner and therefore takes away the dullness of straight practice sessions.

*Fraction Fuel-Up* does not aim to teach in that it does not show children where mistakes are made and how to go about finding the correct solution - it is solely a practice program. It does however keep track of child responses and so the parent or teacher is able to return and see where errors have occurred. At this point, the printer becomes useful - in that there is a worksheet option to generate hard-copy exercises.

The program is not difficult to use, each section is menu driven and there are instruction screens to guide the user through each area. However, I return to my first point and feel that rather than let

the children loose on this one, it would be far better in the long term to spend some time to ensure that they are able to work confidently with the program. This would include going through the making of selections, actual playing of the game and saving scores.

Looking at the actuals, *Fraction Fuel-Up* would suit the 4th to 6th grade child, and covers the general areas of fraction problem solving listed below :

Reducing, renaming and finding equivalent fractions

Adding and subtracting (same denominators)

Adding and subtracting (mixed numbers, like denominators)

Adding, subtracting (unlike denominators)

Adding, subtracting (mixed numbers, unlike denominators)

The game section has the aim of earning the highest ranking (that of Galactic Commander) by gaining points through solving problems in one of the above areas. To get these points a correct answer must be given - the child is allowed three attempts with points decreased after each incorrect attempt. Points lead to fuel and fuel enables the space ship to blast off.

The player may select the category of problem as well as the number of problems they wish to tackle (from 1 to 5). Children can play individually or in pairs against each other to achieve one of the eight ranks ranging from the lowly Trainee (anyone who is down here will definitely need a lot more practice) to that of Galactic Commander (this level is not easily attained). The problems are set out in a sentence with a selection of four answers given on the same screen. The user needs to place his space ship over the correct answer to gain the fuel. Both the keyboard or joystick may be used for input and sound can be turned off if quietness in the classroom is required



## EDUCATION

while others are working at other activities.

The program allows scores to be saved under the players name and is designed to store the 5 most recent scores for up to 75 different players. These scores can be printed, but make sure that your printer card is in Slot 1 - printer support is not mentioned but the Epson/Epson compatible works fine. Another very good feature is that the program also keeps a record of the type of problems a players has accessed and the score obtained within this area along with the number of tries. This option can only be used with the pre-programmed problems and not with customized problem files.

This leads me to another good feature of Fraction Fuel-Up. It is possible for teacher or parent to create specific fraction problems for individual children. There is of course a limit to what can be programmed - for example answers cannot be of greater value than three, only positive fractions can be included, wording of problems cannot be in excess of 100 characters, and so on. However these are not serious

### *Example of worksheet*

#### Problem 01

Your ship needs  $1\frac{1}{2} + 1\frac{1}{2}$  copies of AAR to read during journey. How many copies?

Hint: Don't forget to add whole numbers.

Tank Values:  $\frac{1}{2}$   $\frac{1}{4}$   $\frac{2}{3}$   $\frac{1}{6}$

#### Problem 02

Your spacecraft loses  $1\frac{3}{5} - \frac{4}{10}$  making a wrong turn. How much gas lost altogether?

Hint: Change Fractions to LCD

Tank Values:  $\frac{1}{2}$   $\frac{1}{5}$   $\frac{2}{5}$   $\frac{2}{5}$

#### Problem 03

How many copies of AAR can you take on your trip if you have  $\frac{4}{12}$  chips and each copy costs  $\frac{2}{6}$  chips?

Hint: Careful you don't overspend!

Tank Values:  $\frac{1}{2}$   $\frac{1}{2}$   $\frac{1}{2}$   $\frac{1}{2}$

#### Problem 04

You need  $\frac{2}{10} + \frac{4}{10}$  slots of gas to reach planet FFU! Total fuel needed?

Hint: Hope you can get home!!!

Tank Values:  $\frac{1}{5}$   $\frac{2}{5}$   $\frac{3}{5}$   $\frac{4}{5}$

#### Problem 05

How far to Zips if  $\frac{1}{2}$  way is  $\frac{2}{7}$  cronons?

Hint: Watch your Zips don't turn into Zaps!

Tank Values:  $\frac{3}{7}$   $\frac{1}{7}$   $\frac{2}{7}$   $\frac{4}{7}$

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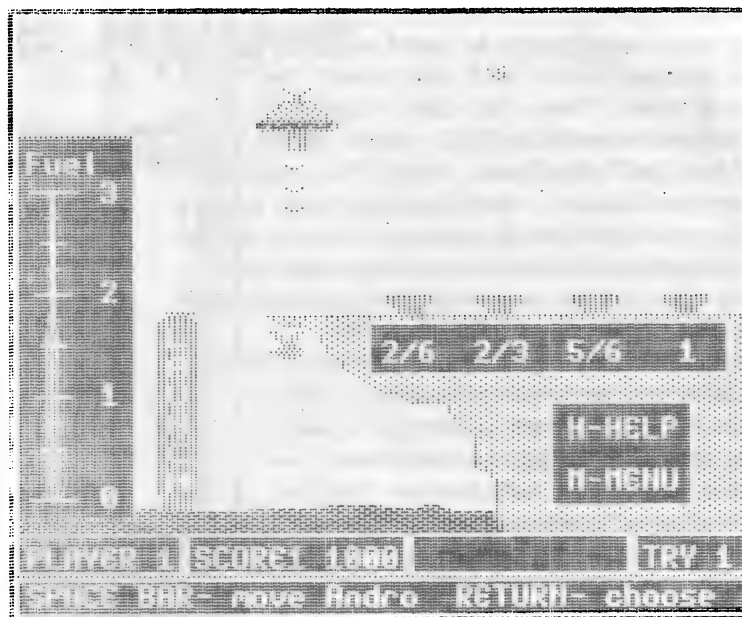
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## Educating the Apple

constraints and the ability to create such sets provides an excellent opportunity to cater for specific learning difficulties as they arise.

Up to 14 files can be saved on the game disk or a data disk can be created from the menu. The problem files stored can further be edited and/or deleted as required. The procedure for this is simple and also menu driven. These problems can also be printed in sections if worksheets are required to give extra practice. I have included an example of one such worksheet.

As with most of the DLM educational software, the manual is well set out and informative. Each section is covered clearly and concisely. A sturdy cardboard card with rankings and scores needed to obtain the ranking is included and this could be easily reproduced so that each member of the class could have their had one. On the reverse simplified instructions are given in case quick reference is needed by the player. A back up disk can be obtained from Dataflow, however this has now become a \$19.50 privilege.

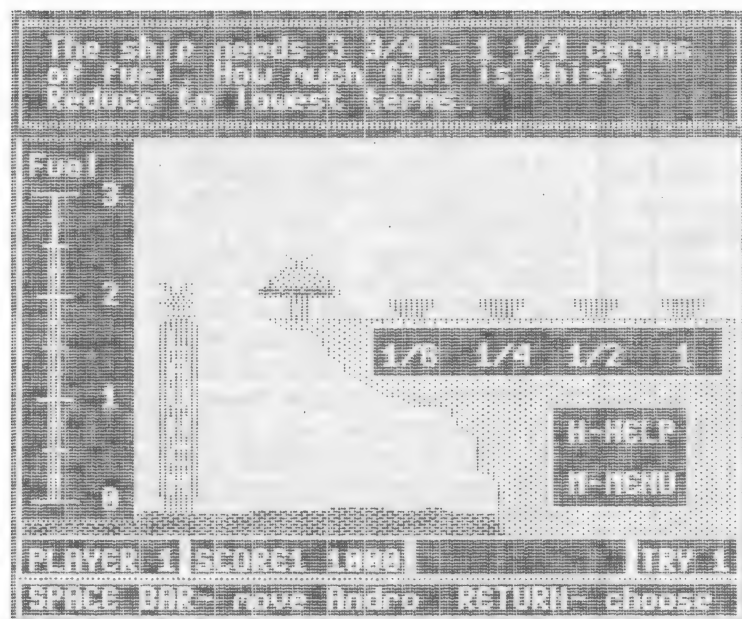


The program is in colour but does not lose out on a green or amber monitor and the graphics are reasonable as can be seen from the screens included as samples. Scores are shown clearly throughout the game as are simple instructions. Numbers are easily read and the screens are well set out with not too much graphics as to clutter.

In conclusion, I must admit I found this to be one of the best programs I have seen in a long time and it was well worth the couple of weeks' wait. It cannot be compared with *Fraction Factory* I reviewed in the September issue. Both have their merits and it does depend on the result one wants to attain and who the program is being targeted at.

If you are a teacher looking for a program to cover this area of your maths program for next year my advice is to buy it. If you are a parent with a child that has shown some difficulties in this area of maths then here is an excellent Christmas present that will give enjoyment as well as development of mathematical skills. It is a program which can aid in learning through practice of different aspects of fractions in an enjoyable way that is not pressured by a time factor.

The only real fault I came across was the slowness in getting from the right answer to filling the spaceship with fuel to the actual launch to get points. This is however only minor and once you are involved and know what you are doing it does become a fun way of practising.



# Certificate Maker

**PROGRAM:** Certificate Maker  
**By:** Springboard  
**Requires:** Apple II+, IIe, IIC  
 64K, one drive  
 graphics printer

**Distributed by:** Dataflow

**Price:** \$90.66

(There is a special price for schools)

What can one say about a program which makes certificates except that it makes certificates? Except perhaps that it gives a very simple and efficient means of producing customised certificates for almost any occasion.

It is very similar to the *PrintMaster* and *Print Shop* programs in that you select a preprogrammed graphic, add extras, then print, however its scope is far narrower and so it what it does, it does very well.

*Certificate Maker* offers a selection of 200 pre-designed templates, many of which include illustrative graphics, 24 different border designs and a very simple editor which allows the entry of a set amount of personalised text in a choice of different fonts (all with upper/lower case for any model Apple) in two sizes. The program then prompts for date and signature lines, and from there on, it's all up to the printer.

Also included to enhance the finished effect in the *Certificate Maker* are 36 coloured seals in the form of stickers that you may (if you feel that way inclined) wish to attach to the certificate. However, it would not be that expensive for any school or organisation to have printed a customised set of such stickers featuring a crest, motif or even a motto.

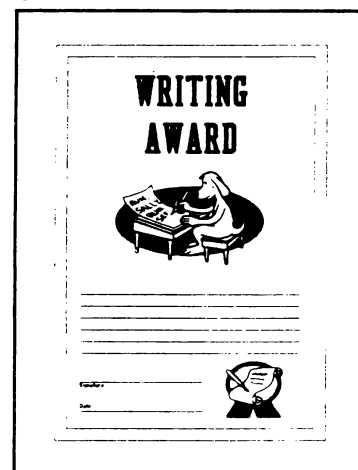
Creating and printing the certificates follows a simple pattern which is very easy to use; each section is completely menu driven. All the certificate templates are illustrated in the manual, including the appropriate disk and side where the template is located. For example,

Templates 1 to 39 are located on Disk 1, Side B, while Templates 128 to 220 are on Disk 2, Side B. This gives ease, for though the information appears on the screen, it is still good to have it at the fingertips in the manual.

Borders range from simple single, double or triple lines through designs, to graphics such as ducks, bears, hearts, snakes and disks. It is also possible to create a certificate with no border.

Choice of font style for the certificate title and what you wish to say on the certificate can be varied both in type and size, though fonts cannot be varied within the one text block. Selection is made with simple keystrokes, and help is on the screen.

This section is extremely well



thought out as style examples appear on the screen when selection is made. Samples of the five fonts are shown below.

The date line is optional and can either be written in full or in numerals only. How you choose is dependent on your own taste, although on some of the certificate templates there is only enough space for the numbered date. It is again

*Samples of the fonts available*

This is the **SERIF** type style  
 This is the **SAN SERIF** type style  
 This is the **SCRIPT** type style  
 This is the **GOTHIC** type style  
 This is the **ART DECO** type style

*There are 24 borders to choose from*

**Links**



**African**



**Gothic**



**Snake**

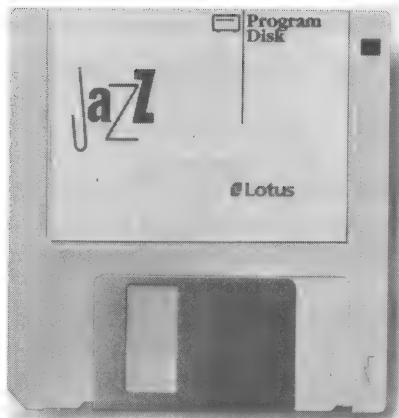


**Egyptian**

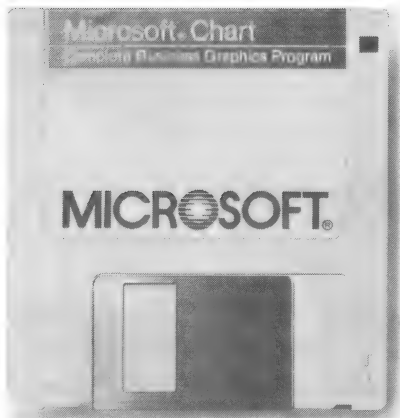


**Disk**





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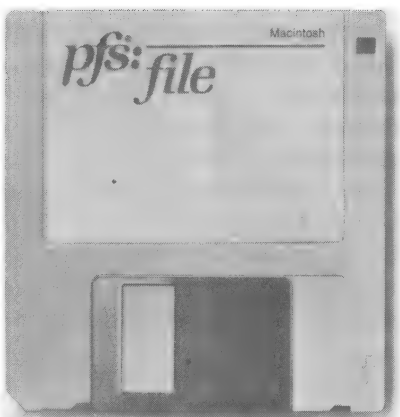
**Microsoft Chart.** 42 different charts and graphs for presentations, sales reports and transparencies.



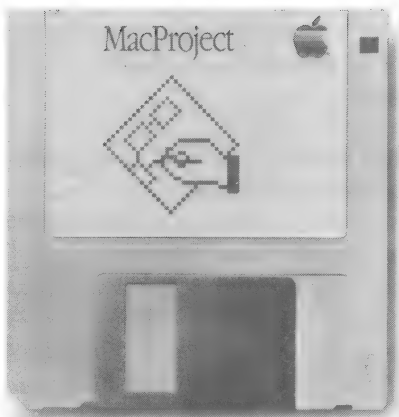
**MacBusiness.** Gain overall financial control of your small business with this integrated, intuitive accounting program.



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possible to leave this blank.

The signature line allows the user to generate a pre-drawn line at the bottom of the certificate for that critical signature. The length of this line is set and cannot be changed as is the font. The user simply enters the title or the name or whatever is desired to appear beneath the scrawl.

The templates cover a wide variety of areas including academic (20 different designs covering subject areas such as reading, writing, music science etc), sports (43 templates here covering general awards, fishing, basketball, football, gymnastics etc), 38 children and family awards for goodness, animal lovers' awards, best friends etc, religious - 16 different templates, general awards and what is titled 'unique awards' which include both humorous and serious awards.

Another feature of the program is the ability to print the same award with different names without having to recreate the template each time. However, this can only be accessed if you have access to a ProDOS master otherwise it is impossible to initialize a data storage disk. This initialization is not possible through the *Certificate Maker* master. Without this each certificate would need to be made separately and cannot be stored for later access. It is possible to print the same certificate as many times as you like but this must be done immediately if you are unable to initialize a data storage disk.

Almost all the popular dot matrix printers and interface cards are supported, and it is a simple menu driven setup procedure to have your printer ready for action.

Incidentally, and this refers back to the previous paragraph, I have found that with dot matrix printers, the quality can be enhanced by photocopying. It may be therefore more expedient to create a set of masters and have these photocopied as required.

It does mean the recipient's name will need to be typed in rather than being

generated in hardcopy, but there is always a price to every short-cut.

One major drawback is that the disks are heavily protected and the user is warned that attempts to make backups could result in damage to the disks.

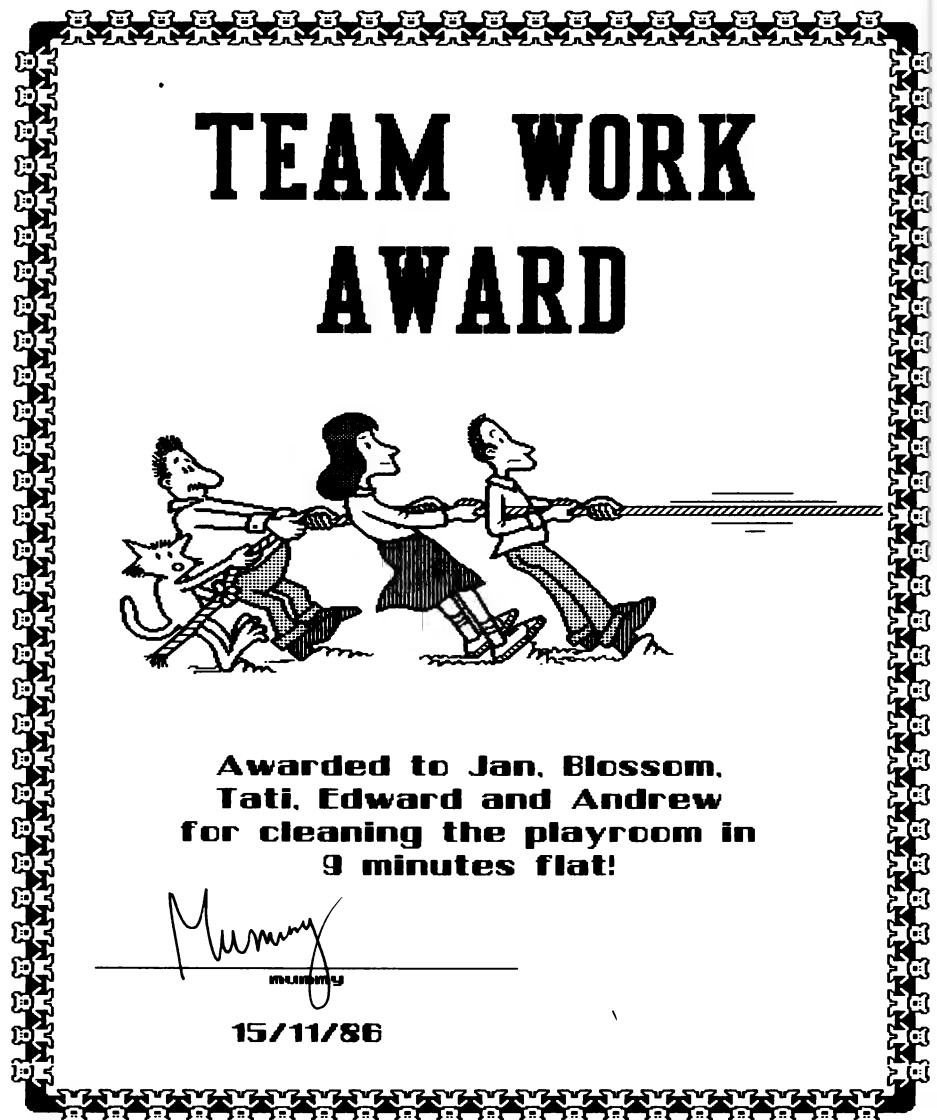
As Dataflow are the Australian distributors, backups would be available but again at that cost.

Where could you possibly use such a program? Well, teacher use is obvious - encouragement awards, merit awards for excellent work, improvement or just for trying, sports awards for sports carnivals and team events.

In the home the program can be used just as easily, as the illustration will testify, however I have found that the children and their friends enjoy using the software themselves and our poor Epson has been running overtime. How long the novelty will last I cannot yet say, but certainly in the school situation the program, in my opinion, would constitute money well spent.

What will be interesting to see is if Springboard do produce a follow-up disk (as *PrintMaster* has with *Art Gallery 1*). I will let you know if I hear anything about it.

*A certificate made for the writer's children*



# MultiScribe for the Apple IIGS

IN OUR AUGUST issue we reviewed a new program called *MultiScribe*, desktop publishing for the Apple IIe, and we said then that it was set precisely so that it could take advantage of any upgrades in memory or speed of operation which came along for the Apple II.

Well, the Apple IIGS has come along, with faster processing speeds, greater memory and high resolution colour graphics.

And guess what, *MultiScribe* is now available for the Apple IIGS.

We haven't been able to do a proper review on *MultiScribe GS* in time for this issue, because we've only seen it (the only copy in Australia) being demonstrated for about half an hour, but it looks really good. (By the time you read this, it will be available in Australia from Techflow Pty Ltd).

*MultiScribe* uses the desktop and icon concept of the Macintosh. You don't need a mouse on your Apple II to take full advantage of all its facilities - but it does help.

It's a word processor which includes all the basics you would require in a complete professional word processing program. For example there are full text formatting options such as left and right and full justification, indent, margins and tabulation etc. All the standard text editing features including cut, copy, paste and replace are there.

But it is a desktop publishing program in that there is a Font Editor which allows you to create your own fonts or use the many fonts which come with the *MultiScribe* disk, up to a fairly large size. The typefaces which have been chosen to be included definitely lead to desktop publishing. Specifically the pictorial font Michelangelo which allows you to add little thumbnail sketches to your copy.

*MultiScribe GS* supports many printers, and is said to give you full ImageWriter and LaserWriter compatibility. This is a great step forward, because compatibility with the LaserWriter is of course very important for desktop publishing.

It has file compatibility with numerous word processors.

It has multiple document windows, and can work with several word processing documents at once.

The different fonts and character sizes appear on screen exactly as they appear when printed (this is called What You See Is What You Get - WYSIWYG.)

Formatting is based on a ruler and provides centring, justification, multiple line spacing, paragraph auto indent,

margins and tabs.

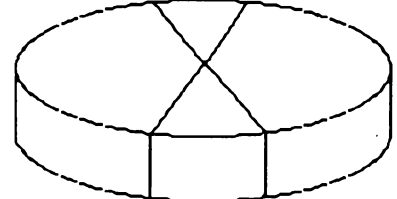
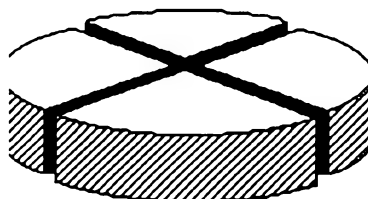
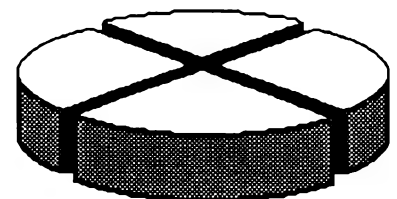
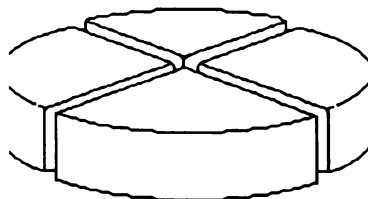
Use it with *TopDraw* for the IIGS for the graphics and pictures, and you're in business.

*TopDraw* works like *MacDraw* for the Macintosh. With it you can make enlarged drawings; it has a wide variety of graphics tools such as rulers, grids and pens, ability to scale, and many filled and hollow shapes such as ellipses, squares and polygons, and horizontal, vertical and diagonal lines.

Editing functions for pensize, patterns and colours and full complement of text options are included.

Look out for a full review of *MultiScribe* and hopefully also *TopDraw* in our next issue.

Both distributed by Techflow Pty Ltd, (047) 58 6924.



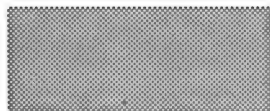
# Christmas Shopping List

by Lynne Ryder



*Christmas  
is just around  
the corner and buying  
our friends Xmas gifts is  
all part of the Christmas spirit.*

*Here is our shopping list - the perfect  
gifts for those that have a computer - or  
even for those who only wish!*



Please note that the costs are current but may vary according to where you shop. If you have any difficulty in obtaining these from your local computer outlet then give a call to the distributor. They will be only too happy to let you know where their products are available.

Most of the selection has been reviewed sometime throughout the year in the *Australian Apple Review*, so if you need more detail have a look through your back issues.

And please note that OziSoft has advised us they are out of stock of *The Great International Paper Airplane Construction Kit* and so what's in the shops now of that particular package is all that will be available till next year.

HAPPY SHOPPING!

**BOOKS :** Always a great present that most of us like to receive (and easy to wrap, too). Our best 10 selections for 1986 are as follows :

2nd Giant Book of Computer Games	Interface Publications	\$9.95
Macintosh Microsoft Basic	Reston Computer Books/ Prentice-Hall	\$35.95
Apple IIc Programmers' Reference Guide	Sams/Pitmans	\$29.95
Apple IIe Programmers' Reference Guide	Sams/Pitmans	\$29.95
Apple IIc Users Guide - L. Poole	Osborne/McGraw-Hill	\$35.95
Apple IIe Users Guide - L. Poole	Osborne/McGraw-Hill	\$35.95
Great International Paper Airplane Construction Kit (Mac only) <b>includes disk</b>	Simon & Schuster/ OziSoft	\$59.95
Squeezing the Apple <b>includes disk</b>	Balmoral Systems	\$39.50
Music for the Apple II (education)	Unsinn/ Dorian Music Qld.	\$29.00
Introducing the Apple IIc	Sams/Pitmans	\$29.95



# Holiday Specials

All prices are negotiable!

Just call (02) 398 5699 NOW to place your order over the phone! Or POST the form below.

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Flight Simulator	\$119.00
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Mind Forever	
Voyaging	\$85.00

On Balance (Ile/Ilc)	\$199.00
Koala Pad	\$255.00
Sprintdisk 256K	
Accelerator Card	\$589.00
PRODOS	
PFS Workmates	\$399.00
Pinpoint 1.3	\$169.00

## B u s i n e s s

Omnis II - Apple IIe ( requires 3 floppydrives or 1 hard disk and one floppy) **\$385.00**

Omnis III - as above **\$949.00**  
(Multi-User version available.)

Typing Tutor III - Touch typing instruction, a number one seller from Simon & Schuster **\$69.95**

## B u s i n e s s

The Great International Paper Airplane Construction Kit -

templates, dozens of designs.. great fun. **\$49.95**

Ultima II - **\$69.95**

Homeword Filer - **\$119.00**

## Order Form - Order Form - Order Form

Post to : Saturday Computer Services, P.O Box 189 St Pauls, 2031

Name : .....

Address : .....

Post Code : ..... Business Telephone : (.....) .....

Machine : ..... Disk/Tape : .....

Bankcard Number : ..... Exp .....

Signature : .....

Product Amount

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Total (Add P&P ) .....

## Holiday Specials

### Macintosh

#### Music Works

**\$99.89**

#### Video Works

**\$179.95**

#### Home Design

**\$189.00**

#### Typing Tutor II

**\$79.95**

#### Mac Golf

**\$99.95**

#### Ultima II

**\$69.95**

## WHAT TO BUY

### OTHER ODDS AND ENDS :

These include products we all use and always need, a good gift if you don't know what the person really needs but you can be sure it will be appreciated.

**Blank Disks:** A safe present for anyone with a drive, and do you know of anyone without one (except MicroBee users) these days?

<b>Memorex</b>	DSDD 5.25	\$4.95/disk
Excellent quality and well boxed	3.5	\$6.24/disk
<b>C.I.S.</b>	DSDD 5.25	\$25.00/10 disks
Good quality at reasonable price		
<b>CenTech</b>	SSDD 5.25	\$39.95/10 disks
Coloured disks to add that extra touch. 14 different colours!	DSDD 5.25	\$49.95/10 disks
	3.5	\$59.00/10 disks

**Dust Covers:** to cover almost all your hardware including printers, computers etc. Range in price from \$15 to \$30.00

**XL Starter Kit :** Includes manual, public domain software on disks, cleaning solutions, disk holder, paper, etc. Available for Apple and Macintosh. A perfect gift for those who have recently acquired a computer - \$99.00.

Memorex - available at most computer stores.  
CIS - available Softcentre Software  
CenTech - available Computer Light House  
Dust covers and starter kits - available Computer Light House  
(Cen Tech distributed by XL Computing)

**SUBSCRIPTIONS :** The perfect gift for those that have everything. Here are the best three that don't take forever to arrive, are crammed with interesting material and reviews and are interesting to read even if you don't have your own computer. The gift that will last till next Christmas comes around.

**Australian Apple Review** - for anyone who owns an Apple of any kind and uses it for any reason. 12 issues for \$34.00 (monthly). (02) 398 5111

**Home Computer GEM** - for anyone that owns any personal computer. 12 issues \$34.00 (monthly). (02) 398 5111

**Run 5** - for all those who enjoy Wargaming. Produced by Roger Keating and Ian Trout - those extremely talented two that are responsible for the Aussie produced wargames - see software below. Arrives on your doorstep four times a year. You can select from either Disk subscription (\$65.00/ 4 issues) or Magazine subscription (\$15.00/ 4 issues).

**SOFTWARE :** Games are always popular but with so many to choose from it's hard to know which one to buy. Here are our selections from the best we've seen this year. A bit of advice - buy early as the most popular (and probably the ones you really want) sell fast and the stock in the shops will probably not be replenished till next year.

**VideoWorks \$180.00** (Macintosh) see review this issue - make your own cartoons

**Mac Golf \$99.95** - a really fantastic game, terrific graphics

Good games: **Flight Simulator** (very good), **Mind Forever Voyaging**, **Ghostbusters**, **Boulder Dash** (see this issue).

**Typing Tutor III** - learn to touch type and you won't get RSI, this one really works. About \$75.

From **Strategic Studies** : They produce four excellent war games simulating different battles. They are well packaged, well documented and excellent value for money. Available for Apple II+, IIe, IIC and GS.

**Carriers at War \$50.00** - War in the Pacific 1941-1945

**Europe Ablaze \$50.00** - Air war over England and Germany 1939-1945

**Reach for the Stars \$45.00** - Different in that it is a space odyssey

**Battlefront \$40.00** - Land combat battle in World War II.

From **Dataflow** : Always has provided the Apple user with one of the best selection of software, particularly in the educational field. Their most popular over the year include the following. All are available to cover the range of Apples available.

**Certificate Maker \$90.66** - Excellent for the children and this will amuse them all holidays.

**Create With Garfield \$56.64** - Use Garfield and friends along with props to create cartoons, posters and labels.

**Fraction Fuel-Up \$56.64** - An excellent gift for children as they can learn to solve fraction problems while playing.

**Print Master \$67.98** - Graphics Program for designing cards, signs, stationery, calendars and banners.

**Art Gallery I \$51.03** - More graphics templates to use with Printmaster

**Art Gallery II \$51.03** - Even more graphics including maps and flags. **Imagineering** : Have tended to steer away from the game orientated program to a more business emphasis.

**Print Shop \$99.00** - Similar to Print Master.

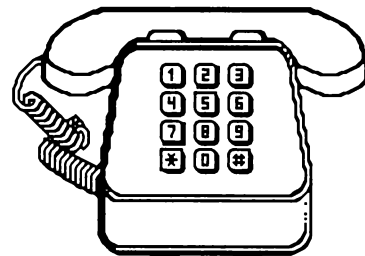
**Print Shop Companion \$85.00**

**Print Shop Paper Pack \$49.00** - an excellent gift for anyone that is already running Print Shop.

## Part 2

# Telecomputing

*by Gareth Powell*



### Running your own Bulletin Board

To get the fullest enjoyment out of using your new communications facility, give some thought to running your own bulletin board, becoming a Systems Operator or SYSOP for short. What are the advantages? Lots. Some tangible, some intangible.

There is a heady feeling of power that you are controlling the messages in and out. More practically, you gain an immense circle of friends, many of whom will be able to help you with any computer or communications problems. Even more importantly it will almost certainly give you access to an immense collection of free programs.

Once you get bitten by the communications bug, you tend to become a fanatic to one degree or another. You start to criticise the way other people are running their bulletin boards and you think, often correctly, you could do a lot better yourself.

To be a systems operator you will need to accept that you have certain responsibilities, certain duties. Firstly, you have to keep a close eye on the board to take out messages which are obscene, old or boring. Sometimes a tricky combination of all three.

A bulletin board is a bit like a garden. You will find areas that simply will not flourish no matter how hard you try, and others that suffer from rampant growth. Again you have to keep a close eye to see a balance is maintained and the board continues to grow in scope and interest and, possibly, so do the number of users.

Face the fact that if you are going to become a bulletin board operator you are going to need rather more equipment than you possibly have at the moment. Is it worth the extra expense? I am quite certain it is, and you may be able to recoup some of the outlay by offering services through the medium of the board.

### The first essential is a telephone

Now, it is true many SYSOPS have run bulletin boards using the household telephone line. But this way lies friction, family squabbles, tears before bedtime and threats to go home to mother. I simply cannot recommend it as the basis for a happy and thriving bulletin board.

You almost certainly will need an extra telephone line to be able to use the Bulletin Board to its fullest advantage.

Next, if you don't want to remain glued to your machine, you definitely need an auto-answer modem. Most of those on the market which I have tested seem totally reliable, but you need to make absolutely sure your modem and your software (more about that in a moment) will work happily together.

Next, you need as much disk storage as you can possibly manage. Either you can use several floppy disk drives or, far, far better, you can use a hard disk. And the bigger the hard disk the wider the services you will be able to offer on your bulletin board.

Hard disk prices have taken a nose dive, and whereas they used to be only suitable and possible for business use,

they are now within the range of the serious amateur and are getting more accessible every day.

What makes a bulletin board useful is being reliable and regular. Users must know the board will be there for them to hook in at previously agreed times. If you have a dedicated telephone line you can probably have it running 24 hours a day, which will suit different people at different times. I tend to access Bulletin Boards between 4 and 5.30 in the morning because I am a light sleeper and I can usually gain access to almost any board at that time.

Nothing gets up my nose more than a bulletin board not up and running when I call. A bulletin board has to be able to run unattended and it must be technically very sound indeed if it is going to give the hundred per cent performance expected of it.

The software has to be written on the basis that a large number of the people calling in will be dills, galahs, no-hopers and likewise nongs. Who are going to give wrong passwords, try incorrect passwords, hang up in mid-message and generally stuff the system around. The software must be able to cope with this in a polite and safe manner. Otherwise, as sure as God made little Apples someone, somewhere is going to access your board and send in a set of signals that will hang it up until you get a chance to sort it out.

It is vitally important that the

software is good enough and reliable enough and intelligent enough to be able to sort itself out.

The most regular problem a SYSOP will encounter is the caller who disconnects in mid-call without going through the proper closing down procedure. The result can be that the board believes it is engaged and will remain so until something is done about it. Or their inelegant and untimely exit can even damage the information in files they were accessing.

Luckily, there are more than enough programs on the market that fulfil those criteria, so you should have no problems getting up and running. There is always a temptation to write a program yourself. But with so much excellent tried and tested software available why try to re-invent the wheel?

If you are using floppy disks, the use of regular back-ups is absolutely essential. Hell hath no fury like a bulletin board user whose programs have vanished from a mangled disk.

For many people, organising a bulletin board is simply too time consuming. However, it is a task that can be shared between two, three or even more people provided they are joined together with a common interest.

To work a board effectively as a SYSOP, you need to dedicate about half an hour every other day to policing the board and a couple of hours at the weekend deleting and updating messages. With almost every current system available, it is possible for you to update the messages and carry out your housekeeping chores from any terminal, which makes life considerably easier. You can even do it when you are on holiday.

It is sometimes possible to get a commercial company to sponsor a bulletin board in return for discreet mentions of their assistance. You have to be a little careful here as you can, if you are not very careful, find yourself running foul of the law, which forbids the setting up of a commercial broadcasting station under the

Telecommunications Act. This aspect of the law has never been tested in the courts. It would be silly for you to be the test case, so use a little discretion if you are getting commercial sponsorship.

Most of the packages for running bulletin boards originate in the U.S. You might think these would be inherent problems with these packages because they are designed to work with the Bell system while we, like the rest of the world, are on CCITT. In point of fact, it makes not a bit of difference. The software package does not care which system you are using. As long as you remain within the 300 bits per second area you will have absolutely no problems.

The best advice is to start with 300 and make sure that you have your bulletin board working perfectly under those conditions before you start venturing into areas where the rate of data transfer is 400% greater.

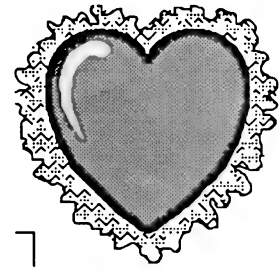
The way in which these programs work is through four interlinking segments. These are the main menu program, the files, the drivers and the interrupt system.

When users call in they see the menu as the outward appearance of your system. Most menus come in plain vanilla and the graphics leave much to be desired. Improving them is no great problem, and it makes sure that the appearance of your bulletin board to the great world outside at least suits your personality.

The menu has to take into consideration that the various computers accessing the board may have different displays, operating systems - even keyboards.

The menu directs the caller from the opening stage of the program to sub-routines depending on menu choices.

At the beginning the balance of your bulletin board is likely to be something less than perfect. Some items on your menu will be totally ignored. Others will be swamped and sub-routines will divide down to sub-routines and so on. Don't let this worry you. It is almost a



self-correcting process.

As a sub-routine reaches a certain size, gets to a critical mass, it can be promoted to becoming a main part of the menu, while the least frequently used section of the menu gets demoted into a sub-routine or is even banished from the board altogether.

The heart of the system, the reason for its existence, are the files. In most normal programs two files are kept for messages. All of the text of messages is kept in one single continuous file. The control of this file rests with the second file which contains all the information regarding these messages - who the message is from, who it is intended for, any password that is required to read the message, the date that the message was put on the board and the date of its expiry and, most importantly, the exact location of the message on the other file.

This second file is sometimes called the "header file" and works with fixed size "header" records, making it easy to access each header as it is needed.

Each user usually has a separate file which contains such important details as the password, the date of the last call and the frequency of use.

Another separate set of files are the "help" files. These need to cover every contingency because, certainly at the beginning, your callers will need all the help they can possibly get. And without it they can either corrupt part of your system or, worse, get bored with the whole idea and not bother calling again.

You should be easily able to access, edit and update these files because, as you find out which problems are most prevalent for users, so you can amend your help files to pay particular attention to that area of difficulty.



# Apple Assembler Part Four

by Craig Kirkwood

Those dedicated *Apple Review* readers who have been following this series on Apple assembly language, will recall that we have so far covered, in somewhat brief detail, most of the 6502 Instruction set. This month I intend to introduce that area of memory called the Stack.

Let's begin by revising our understanding of the way memory is arranged in the Apple II series. You may recall that memory is divided into "pages" of 256 (\$FF) bytes each. To address a particular location, the program needs to provide the page number and the location within that page, in that order. It is normally sufficient to consider the location as simply a two byte address being, for example, the 1024th accessible memory location. However the paging concept becomes important when we see that the first two pages of memory have special reserved functions.

Consider fig. 1 to illustrate the 6502 paging concept.

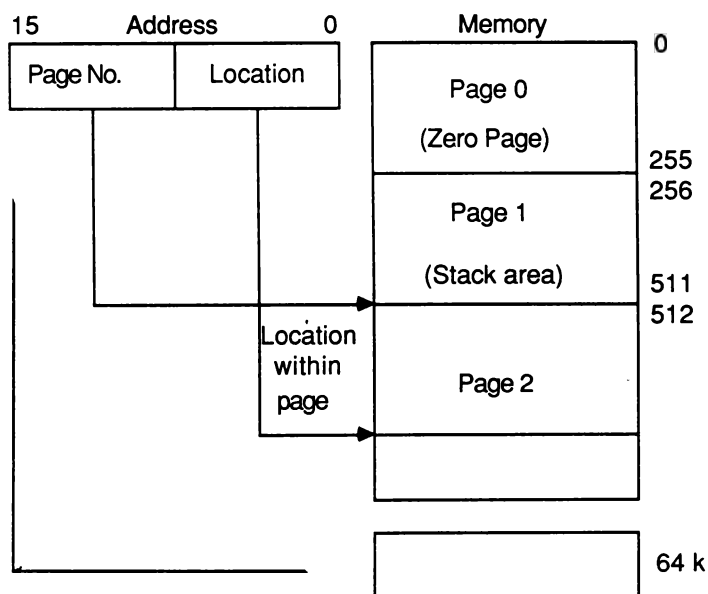


Figure 1. The Paging Concept

As can be seen from the diagram, the first two pages of memory are referred to as Zero Page and the Stack respectively. Zero page, you may recall, has its own addressing mode (several actually) and is used a great deal in assembly language. The reason for this is that it only requires one byte to access memory on that page. If you consider that the first byte is the page address, then if this is zero there is no need to supply it since the processor will automatically assume it to be so. In other words if you don't supply the first byte it's taken to be zero. Thus all that is needed is the location within the page and we've saved a whole byte!

There is actually a little more to it than that. The assembler assembles the code slightly differently when using zero page. There is a different machine code value stored to indicate to the processor that zero page is being accessed which stops it from looking for a page address. In addition, some assemblers require the programmer to provide a special symbol when supplying a zero page address.

The significance of this will become evident when we come to look at "Indexed" and "Indirect Indexed" addressing. Only having an eight bit data path with a sixteen bit address path would be impossible without the provision of zero page.

The next page of memory down the line is the Stack. The is probably even more useful to us than zero page. This is a very important chapter in our knowledge of assembler. Listen closely for an explanation. . .

The stack is technically referred to as a "last-in, first-out", or LIFO, data structure. This means it is an area of memory to which data is written and retrieved in chronological order. The first element written to the stack is always at the bottom and consequently is the last to leave when the stack is read from. The last element written to the stack is the first one to leave - hence the expression "last-in, first-out".

Confused? Consider a lift full of people. Assuming all the occupants of the lift are conveniently alighting at the same floor, then the first person to get in will be the last to leave and vice-versa. The same principle applies to the stack.

The beauty of the stack lies in its speed and accessibility. Normally to store a byte of data at a memory location we would use the STA instruction. e.g. STA \$F2  
or STA LOCAT

However if we temporarily wished to store the accumulator contents in memory while we performed some other function such as a calculation or jump to a subroutine, then we could do it quickly and quietly with a stack instruction.

There are four stack instructions available to us on the 6502 (some more would be nice, but we can't do much about that). These instructions either "pull" or "push" data onto or off the stack. The pull instructions are as follows:

PLA Pull Accumulator  
PLP Pull Processor reg (flags/status reg)

These instructions actually instruct the CPU to pull the next byte of data off the stack and place it in the accumulator or status register respectively.

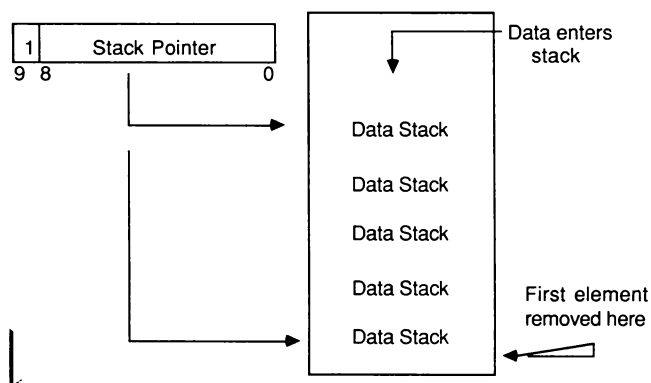
Some time ago, I stressed that when dealing with memory the data is merely copied, not removed, from the initial address to the destination address. For example when performing an instruction such as LDA MEMORY, the data is copied from location "MEMORY" into the accumulator leaving the

## PROGRAMMING

original in tact. This fact remains when dealing with the stack except that this page of memory is controlled by a register called the stack pointer. The stack pointer is incremented or decremented after every push or pull instruction such that it points to the next location to be written to. Remember though, the data is not actually destroyed until it is written over, and thus can be retrieved using conventional LDA / LDX / LDY instructions should you wish to do so.

The diagram of Fig. 2 may help to illustrate the workings of the stack. It is interesting to note that the stack pointer (at least conceptually) is actually a nine bit register whose ninth bit is permanently a "1". Since the stack lives on page one of memory the "high" address byte is always one.

Fig. 2 The Stack



When a Pull instruction is executed the stack pointer is incremented so that it points to the next location to be written to.

The push instructions perform exactly opposite functions to the PLA and PLP instructions. When a push instruction occurs, the data is pushed onto the stack from the top and the stack pointer is decremented so that it points to the next location to be written to. Note I say decremented. The 6502 begins its stack at the highest location (511) and works backwards through memory towards location 256. Take a look at the diagram if this is hard to conceive.

An additional two instructions are available in order to manipulate the stack pointer. These simply transfer the contents of the X register to the stack pointer and vice versa. They are as follows:

TXS Transfer X reg. to stack pointer.  
TSX Transfer stack pointer to X reg.

Take heed! TXS does not transfer the X register to the stack; the stack pointer is the recipient. I emphasise this to point out a limitation of the 6502.

The stack, as I mentioned, is used a great deal when using subroutines. Those of you familiar with Applesoft BASIC will recall the GOSUB command, used to direct program flow to a

subroutine. There is a similar command in assembler except there is somewhat more to consider. The command in assembler is JSR (Jump to SubRoutine), with which I will be dealing more in the future. When using this instruction one must ensure that the subroutine does not change the contents of any of the registers, including the status register (P register - containing the oh-so-important flags). The only way to do this in many cases is to save the registers on the stack prior to jumping to the subroutine. Now, if the 6502 was equipped with some additional instructions it would be possible to save every register on the stack with one cycle per register. However, we are limited to the saving of only the accumulator and the P register directly. In order to save the remaining registers it is necessary to first transfer each in turn to the accumulator, then issue the PHA instruction. In BASIC this is all done for you, but in assembler, where every detail is relevant, this is a real time waster.

The stack also provides a means to manipulate the status register. If the PLA instruction is executed following the PHP command, the contents of the status register are effectively transferred to the accumulator and can then be changed at will. There are instructions to change the flags of the status register, but it is sometimes useful to transfer it to the accumulator for certain operations.

Let's look at an example of stack operations using a diagram of its contents.

```
1 START PHA ; Push A onto stack
2 PHP ; Push P onto stack
3 TXA ; Transfer X reg to A
4 PHA ; Push X reg onto stack
5 TYA ; Transfer Y reg to A
6 PHA ; Push Y reg onto stack
```

Note: the figures on the left are to relate to the diagram only

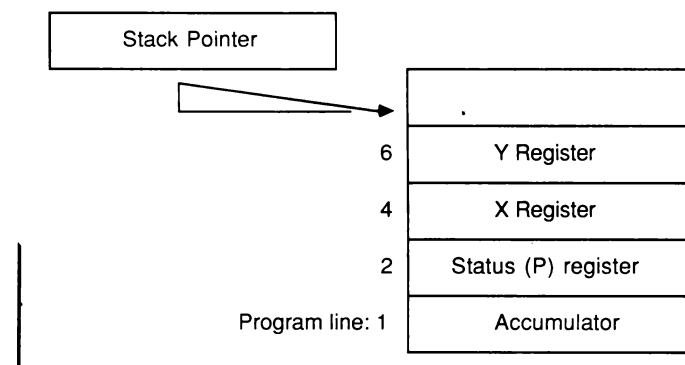


Fig 3 Stack Example

This example should help to make this somewhat difficult concept a little clearer. I will be dealing more with stack manipulation over the next few months as we begin to develop programs and subroutines in more detail.

# The Worm in the Apple

THIS worm finds quiet amusement in the sight of other computer manufacturers lifting up their aged skirts and trying to hop, with some small difficulty, onto the desktop publishing bandwagon which was set rolling by the Macintosh.

Take the latest efforts of Apricot - a fruity machine which emerged well after the Apple - in the Old Dart.

My Pommie cousin, Montmorency Worm, could hardly contain his glee when he told me over the telephone that Apricot had launched a total desktop publishing package. Their new package features the Apricot Xen-i - their ultra-flashy top of the line machine - complete with a laser printer which Monty thinks may have been a Hewlett-Packard in drag, and *PageMaker*, the ubiquitous program from Aldus on which Apple have bet their shirts.

All very impressive, especially at an all-inclusive price which is the sunny side of \$20,000. Sadly, as Monty in unforgivable and uncontainable glee told me, the page description language they are using is not PostScript.

Nor yet its newly arisen rival DDL.

Nor yet even Xerox's sole entry InterPress, which might be considered the Daddy of them all.

No, they have PDL which is a page description language originally created for the Hewlett-Packard LaserJet and intended to be used with replaceable font cartridges. This is rather similar to selling a Ferrari SuperAmerica with a Datsun engine. Not the way to go at all.

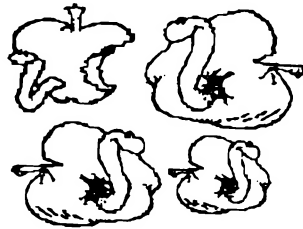
Monty tells me that the head honcho for Apricot in desktop publishing is of the opinion that they will put on PostScript when the new version of this language is announced. That, as my American cousins say, will be Real Soon Now. But not before well into next year.

The Apricot system, decorative and brisk though it may be, will only do a limited form of document handling and form creating. Good for corporate business. Not so good for graphics and

design.

Being a humble Worm with little or no learning I can never exactly remember quotations.

But the one I am thinking of goes roughly - "C'est magnifique - mais c'est ne pas le desktop publishing".



SAD to see war breaking out between journalists and computer companies. But it happens, it happens. From the Old Dart - yet again - comes the news that Guy Kewney, probably the best of the English computer journalists, is miffed and dismayed with Apple. And has put his foot down with a firm hand. His view is that he is a hard-working journo who gets paid union rates and is therefore poor. He has two computers he works with. He needs a third like a hole in the head.

Consequently he has publicly declared he will not review new programs for the Macintosh Plus because Apple want to charge him a large amount of real upfront whip-out cash to upgrade his current standard Macintosh machine. Without the upgrade he cannot review the programs.

His argument, which he puts cogently and well, is that if Apple want programs which are important to them reviewed - in this case *dBase III* - they should see that computer journalists have the wherewithal to review them.

No upgrade, no reviews. And there the matter rests with a fair amount of acrimony on both sides.

This Worm concedes that this is a difficult situation with much to be said for both sides. Newspapers are

traditionally loath to commit large amounts of capital expenditure to provide reviews which are, in their view, a form of unpaid publicity for the computer manufacturer.

Apple are apparently, as a corporate decision, unwilling to let journo's have machines except as a temporary loan. This is true in the UK and Australia and in most other countries with which I have connections.

With programs for the IBM PC the situation is easier. Most newspapers already have several of these computers which their journalists have access to for review purposes. But the Macintosh is a unique, and not inexpensive, machine. Apple are unwilling to loan it out except on a temporary basis for new models.

Which means that unless a freelance reviewer can be found with a Macintosh Plus many new programs simply go unreviewed.

This Worm is certainly not suggesting that he has the solution to this problem. Merely acknowledging that the problem exists and that many journalists of his acquaintance, feel very much as Guy Kewney does.



THIS Worm has had the most amazing experience. He has been using a portable Macintosh. And before you all get your knickers in a twist asking me where you can get one, know first that one of these machines, desirable though it may be, is going to cost you the thick end of \$14,500. Which is more than somewhat for a lap computer.

The story behind this machine is fascinating. The American Department of Defence decided they wanted a portable Macintosh. (And who does not? We would all like to be famous and learn how to tapdance as well). The American DoD (if I may make so bold as to use their abbreviated name on short acquaintance) knows not of refusals.

*Australian Apple Review 48*



# MEMOREX

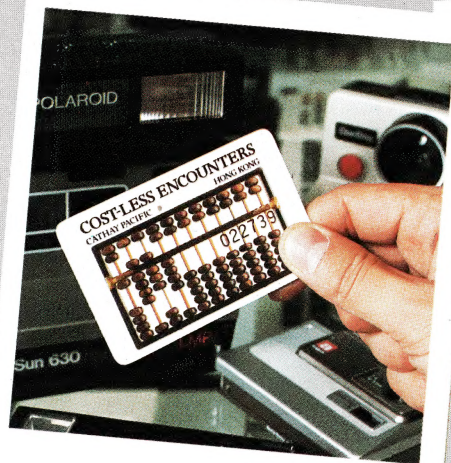
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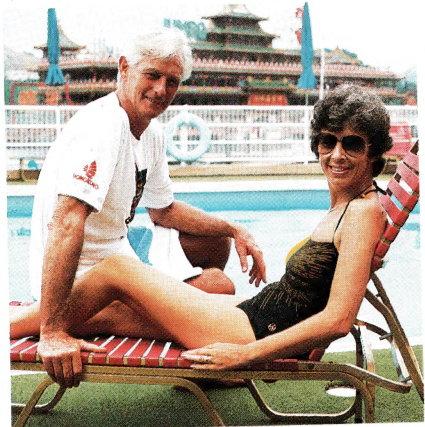
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